

Appendix A

Definitions and Agency Descriptions

APPENDIX A

DEFINITIONS AND AGENCY DESCRIPTIONS

Terminology used within this Scoping Document is described and defined below. The glossary of definitions is intended as an aid for purposes of the Oroville relicensing only and is not intended, nor should it be construed as, a legally accurate definition of terms contained therein.

DEFINITIONS

afterbay	A reservoir located immediately downstream from a powerhouse, sometimes used to re-regulate flows to the river or stream.
anadromous	Migrating up rivers from the sea to breed in freshwater, such as salmon and steelhead.
bank	The rising ground bordering a stream or river. Banks are identified as right or left as viewed facing downstream.
basin	A land area having a common outlet for its surface water runoff.
basin plan	Regional Water Quality Control Board's Central Valley Regional Water Quality Control Plan (CVRWQCB 1998) identifies beneficial uses, water quality objectives, numeric and narrative standards for the basin that includes the Feather River watershed.
beneficial use	Traditionally, the use of water for such benefits as agriculture, mining, power development, and domestic water supply.
capacity	The production level for which an electrical generating unit or other electrical apparatus is rated, either by the user or manufacturer. (FERC) Capacity is also used synonymously with capability.
channel	An open conduit either naturally or artificially created which periodically or continuously contains moving water; or forms a connecting link between two bodies of water. River, creek, run, anabranch, and tributary are some of the terms used to describe natural channels. Canal and floodway are two terms used to describe artificial channels.
confluence	The point where two streams meet.
consumptive use	Non-reusable withdrawal of water where the water is evaporated, transpired by plants, incorporated into products or crops, or consumed by humans or animals.
coordinated operation	Generally, the operation of two or more interconnected systems to achieve greater reliability and economy. As applied to hydropower resources, the operation of a group of hydropower plants to obtain optimal power benefits with due consideration to all other uses.

coordination	The practice by which two or more interconnected electric power systems augment the reliability of bulk electric power supply by establishing planning and operating standards; by exchanging pertinent information regarding additions, retirements, and modifications to the bulk electric power supply system; and by joint review of these changes to assure that they meet the predetermined standards.
crest	(1) The highest stage or level of a flood wave as it passes a point. (2) The top of a dam, dike, spillway, levee or weir, to which water must rise before passing over the structure.
cumulative impact	The impact on the environment which results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (CEQ regulations 40 CFR 1508.7)
dam	A structure for impounding water.
delta	The nearly flat alluvial tract of land at the mouth of a river, commonly forming a triangular or fan-shaped plain. Most deltas are partly below water.
demand	The rate at which electric energy is delivered to or by a system, part of a system, or a piece of equipment. It is expressed in kilowatts, kilovoltamperes, or other suitable units at a given instant or averaged over any designated period of time. The primary source of “demand” is the power-consuming equipment of the customers.
designated	Given formal statutory recognition, as in a federal or state river system.
discharge	The rate of streamflow at a given instant in terms of volume per unit of time.
diversion	The taking of water from a stream or other body of water into a canal, pipe, reservoir, or other conduit.
docket	A formal record of a Federal Energy Regulatory Commission proceeding. Dockets are available for inspection and copying by the public. Dockets for hydroelectric projects can be accessed through the FERC CIPS website.
ecosystem	The interacting system of a biological community and its geochemical and geophysical environment.
effects	Effects and impacts as used in the CEQ regulations are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

energy	Capacity of a physical system to do work as measured by the capability (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks.
environment	The sum of all external conditions and influences affecting the life, development, and, ultimately, the survival of an organism.
erosion	The wearing away of soil and rock by weathering, mass wasting, and the action of streams, glaciers, waves, wind, and underground water.
fish ladder	A series of ascending pools of running water constructed to enable fish to swim upstream around or over a dam.
fish passage	Features of a dam that enable fish to move around, through, or over a dam without harm. Generally an upstream fish ladder or a downstream bypass system
flood	The inundation of a normally dry area caused by high flow, or overflow of water from an established watercourse (such as a river, stream, or drainage ditch), or ponding of water at or near the point where the rain fell. This is a duration-type event with a slower onset than flash flooding, normally greater than 6 hours
flood management	(1) Reducing risk by building dams and/or embankments an/or altering the river channel. (2) Reducing flood risk by actions such as discouraging floodplain development, establishing flood warning systems, protecting urban areas, and allowing the most flood-prone areas to remain as wetlands
floodplain	That portion of a river valley, adjacent to the channel, that is built of sediments deposited during flood events that becomes inundated with water when the river overflows its bank at flood stages.
forebay	The impoundment immediately above a dam or hydroelectric plant intake structure from which water is drawn into a tunnel or penstock for delivery to the powerhouse. The term is applicable to all types of hydroelectric developments (storage, run-of-river, and pumped storage).
gate	A device that is moved across a waterway from an external position to control or stop flow
generation	The process of producing electric energy by transforming other forms of energy; also, the amount of electric energy produced, usually expressed in kilowatt-hours.
habitat	The environment in which the life needs of a plant or animal are supplied.

human environment	Defined by NEPA regulations to include the natural and physical environment and the relationship of people with that environment.
hydrology	The applied science concerned with the waters of the earth, their occurrences, distribution, and circulation through the unending hydrologic cycle of evaporation, transpiration, precipitation, infiltration, storage, and runoff.
hydropower	The harnessing of flowing water to produce mechanical or electrical energy.
impoundment	A body of water such as a pond, formed by a dam, dike, floodgate or other barrier.
indirect effects	Effects that are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.
instream flow	The water flowing in a riverbed, which excludes water diverted from the river for human use
intake	The entrance to a conduit through a dam or a water facility.
irrigation	The controlled application of water to arable lands to supply water requirements not satisfied by rainfall.
levee	An artificial embankment built along a watercourse to protect land from flooding. If built of concrete or masonry the structure is referred to as a floodwall. Levees and floodwalls confine streamflow within a specified area to prevent flooding.
license	Authorization by the FERC to construct, operate, and maintain non-federal hydro projects for a period up to 50 years.
licensee	Any person, State, or municipality licensed under the provisions of Section 4 of this Act, and any assignee or successor in interest thereof (Federal Power Act, Sec. 3 (5)). The Department of Water Resources (DWR) is the licensee for Oroville Facilities FERC Project 2100. A licensee takes the lead in developing necessary information and preparing formal documents related to a project.
load	The amount of electric power or gas delivered or required at any point on a system. Load originates primarily at the energy consuming equipment of the customers.
mandatory conditions	Refers to the specific legal authority of resource agencies to impose conditions on a FERC-licensed project.
minimum flow	The minimum river flow required to sustain aquatic life. Often required at a hydroelectric dam as a condition of the dam owner's operating license.
mitigation	To make or become less intense or severe.

new license	Any license, except an annual license issued under section 15 of the Federal Power Act, for a water power project that is issued under the Federal Power Act after the initial license for that project.
nutrients	Animal, vegetable, or mineral substance that nourishes individual organisms and ecosystems.
off-peak energy	Electric energy supplied during periods of relatively low system demands.
Oroville Facilities	Elements of the State Water Project, Oroville Division, as identified in the Federal Energy Regulatory Commission License, Project No. 2100. These elements are listed in Section 2.1 of this document.
power	The rate at which work is done, The rate at which energy is transferred. The watt is a typical unit of power measured in units of work per unit of time.
production (electric)	Act or process of producing electrical energy from other forms of energy; also, the amount of electrical energy produced expressed in kWh
ramping	The act of increasing or decreasing stream flows from a powerhouse, dam, or diversion structure.
rating	A manufacturer's guaranteed performance of a machine, transmission line, etc., based on design features and test data. The rating will specify such limits and load voltage, temperature, frequency, etc. The rating is generally printed on a nameplate attached to equipment and is commonly referred to as the nameplate rating, nameplate capacity, etc. (FERC).
reach	The distance between two specific points delineating a portion of a stream or river.
relicensing	The administrative proceeding in which FERC, in consultation with other Federal and State agencies, decides whether and on what terms to issue a new license for an existing hydroelectric project at the expiration of the original license.
reservoir	A pond, lake, tank or basin, natural or man-made, used for the storage, regulation, and control of water
resource agency	A federal, State, or interstate agency exercising administration over the areas of flood control, navigation, irrigation, recreation, fish and wildlife, water resource management (including water rights), or cultural or other relevant resources of the State or States in which a project is or will be located. (FERC regulations - 18 CFR 4.30(b)(27))
riparian	Pertaining to or situated on the bank of a body of water, especially of a river.
riparian habitat	The habitat found on or along stream banks and river banks.
river	A natural stream of water emptying into an ocean, lake, or another river.

river basin	The entire area drained by a river and its tributaries.
runoff	Water in excess of that which can be absorbed by the ground and which runs off the land into streams, rivers, or lakes
sand	A detrital particle smaller than a granule and larger than a silt grain, having a diameter in the range of 1/16 to 2 mm.
scoping	An early and open public process that is part of the NEPA and CEQA process for determining the issues to be addressed and identifying significant issues, and needed analysis related to a proposed action. Scoping invites participation by government agencies, tribes and other interested parties, identifying issues to be analyzed in depth, eliminating issues which are not significant, identifying other environmental review or consultation requirements, and identifying timing of environmental review, planning, and decision-making.
scour	Concentrated erosive action, especially by stream water, as on the outside curve of a bend; also, a place in a stream bed swept clear by a swift current.
sediment	Solid fragmental material that is transported and deposited by water, wind or ice, chemically precipitated from solution, or secreted by organisms that form in layers in loose unconsolidated form (e.g., sand, mud, till).
settlement agreement	A formal agreement that states agreed-to provisions, in this case for a new FERC license. FERC encourages Applicants to prepare and file Settlement Agreements. Most measures in Settlement Agreements are included in license Articles; however, FERC cannot include measures that are in conflict with the Federal Power Act or other federal statutes or beyond its regulatory jurisdiction.
sere	A sequence of ecologic communities that succeed one another in development from pioneer stage to climax community.
spill	Water passed over a dam without going through turbines to produce electricity. Spill can be forced, when there is no storage capability and flows exceed turbine capacity, or planned (e.g., when water is spilled to enhance juvenile fish passage).
spillway	A structure over or through which excess or flood flows are discharged. If gates control the flow, it is a controlled spillway, if the elevation of the spillway crest is the only control, it is an uncontrolled spillway.
storage reservoir	Reservoir that has space for retaining water - from springtime snowmelts, for example. Retained water is released as necessary for various uses, including power production, fish passage, irrigation, and navigation.
stratification	Thermal layering of water in lakes and streams.

transmission	The movement or transfer of electric energy over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to consumers or is delivered to other electric systems. Transmission is considered to end when the energy is transformed for distribution to the consumer.
tributary	Any stream that contributes water to another stream
turbidity	A measure of the extent to which water is stirred up or disturbed, as by sediment; opaqueness due to suspended sediment
water quality	The condition of water as determined by measurements of such factors as suspended solids, acidity, turbidity, dissolved oxygen, and temperature and by the presence of organic matter and/or chemical compounds
water rights	Priority claims to water. A legal right to use a specific amount of water from a natural or artificial body of surface water for general or specific purposes such as irrigation, mining, power, domestic use, or instream flow
watershed	All the land drained by a given river and its tributaries An entire drainage basin including all living and nonliving components of the system.
water year	The 12-month period for which the USGS reports surface water supplies. Water years begin October 1 and end the following September 30, and are designated by the calendar year in which the water year ends.
wetlands	Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. (US Army Corps of Engineers and US EPA definition) Wetlands must have the following three attributes: (1) at least periodically, the land supports predominately hydrophytes; (2) the substrate is predominately un-drained, hydric soil; and (3) the substrate is on soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

FEDERAL AGENCIES

CEQ: *Council on Environmental Quality* – Agency of the President responsible for the oversight and development of the National Environmental Policy Act (NEPA) implementing regulations. In 1979, CEQ issued first set of binding regulations concerning the implementation of NEPA.

USEPA: *Environmental Protection Agency* – Federal Agency created in 1970. The mission of the U.S. Environmental Protection Agency is to protect human health and to safeguard the natural environment--air, water, and land--upon which life depends. The EPA has three roles in the NEPA process. EPA reviews all EIS documents for adequacy and environmental quality of the proposal, provides filing and noticing in the Federal Register, and serves as a cooperating agency concerning EPA environmental programs (water quality, air quality, solid waste, toxic substances, and other areas of pollution control).

FERC: *Federal Energy Regulatory Commission* – Commission composed of five members appointed by the President, supported by a staff that includes the Office of Hydropower Licensing, that is charged with reviewing and processing license and re-license applications and making recommendations to the Commission.

NMFS: *National Marine Fisheries Service* - The National Marine Fisheries Service (NMFS) or "NOAA Fisheries" is a part of the National Oceanic and Atmospheric Administration within the Department of Commerce. NMFS administers NOAA's programs that support the domestic and international conservation and management of living marine resources. NMFS provides services and products to support domestic and international fisheries management operations, fisheries development, trade and industry assistance activities, enforcement, protected species and habitat conservation operations, and the scientific and technical aspects of NOAA's marine fisheries program. NMFS administers the ESA as it relates to anadromous fish.

USACE: *United States Army Corps of Engineers* – Federal government's largest water resource development and management agency, regulates development in navigable waters and wetlands through its Section 404 (Clean Water Act) permitting process.

USFS: *United States Forest Service* – The U.S. Department of Agriculture Forest Service is a Federal agency that manages public lands in national forests and grasslands. The Forest Service is mandated by Congress to manage national forests for additional multiple uses and benefits, and for the sustained yield of renewable resources such as water, forage, wildlife, wood, and recreation. Multiple use means managing resources under the best combination of uses to benefit the American people while ensuring the productivity of the land and protecting the quality of the environment. The Forest Service is also the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry resource agencies.

USFWS: *United States Fish and Wildlife Service* - The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. Among its key functions, the Service enforces Federal wildlife laws, protects endangered species, manages migratory birds, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their international conservation efforts. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to State fish and wildlife agencies.

Indian Tribe – In reference to a proposal to apply for a license or exemption for a hydropower project, an Indian Tribe means a separate and distinct community or body of people of the same or similar aboriginal race historically inhabiting areas within the United States that:

- is united in a community under one leadership or government constituted by law or long-standing custom;
- inhabits a particular territory;
- is recognized by treaty with the United States, by federal statute, or by U.S. Secretary of the Interior; and
- whose legal rights as a tribe may be affected by the development and operation of the hydropower project proposed, as where the operation of the project could interfere with the management and harvest of anadromous fish or where the project works would be located within the tribe's reservation.

STATE AGENCIES

DFG: *Department of Fish and Game* - The mission of the Department of Fish and Game is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.

DPR: *Department of Parks and Recreation* – The mission of the Department of Parks and Recreation is to provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation. DPR is responsible for managing nearly 1.3 million acres, with over 280 miles of coastline; 625 miles of lake and river frontage; nearly 18,000 campsites; and 3,000 miles of hiking, biking, and equestrian trails.

DWR: *Department of Water Resources* – The mission of the Department of Water Resources is to manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments. DWR is specifically responsible for design, construction, operation and maintenance of the State Water Project, which includes the Oroville Facilities. DWR is the licensee for the Oroville Facilities.

NAHC: *Native American Heritage Commission* - The Mission of the Native American Heritage Commission is to provide protection to Native American burials from vandalism and inadvertent destruction, provide a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, bring legal action to prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries, and place of worship on public property, and maintain an inventory of sacred places.

SHPO: *State Historic Preservation Officer* – Within California, the SHPO is responsible for assisting federal and other state agencies with the implementation of laws designed to protect cultural resources. The SHPO is afforded an opportunity to comment on any actions that may affect a historic property.

SWRCB: *State Water Resources Control Board* – In 1967, the Porter-Cologne Act established the SWRCB and nine regional boards as the state agencies with primary authority over the regulation of water quality and allocation of appropriative surface water rights in California. SWRCB also implements Clean Water Act provisions within the State.

Appendix B

Resource Issues, Concerns, and Comments Tracking

APPENDIX B
RESOURCE ISSUES, CONCERNS, AND COMMENTS TRACKING

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APPENDIX B

RESOURCE ISSUES, CONCERNS, AND COMMENTS TRACKING

This document tracks the status of resource issues, concerns, and comments identified by Participants through the Alternative Licensing Process (ALP). Some of these issues were identified during pre-scoping activities conducted between June and November 2000. Others have been developed by the Plenary Group and Work Groups during more recent meetings or included in comment letters submitted by several of the participants. These comments were used to develop issue statements and issue sheets that were in turn used to develop study plans. Sorting of issues was accomplished through discussions at the Task Force and Work Group meetings in the ALP. The following tables combine the Draft SD1 Appendix B (Resource Issues, Concerns, and Comments) and Appendix C (Additional Issues, Concerns, and Comments Under Current Review). Except where noted, Reference Numbers from the Draft SD1, Appendix B directly correspond to Reference Numbers in the tables below. Reference Numbers from Draft SD1 Appendix C are included in the notes column. A number of comments did not address resource issues or are not applicable to relicensing. These are included below, in a section titled Non-resource Specific Comments.

ENGINEERING AND OPERATIONS

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE1	Consider adding additional generating capabilities (some existing infrastructure).	SP-E3			
EE2	Intake on North side of dam - Afterbay outlet motoring to provide spinning reserve.	SP-E3			
EE3	Use real-time hydraulic projections, inflow/outflow rather than yearly projections.	SP-E1			
EE4	PLC upgrades?	SP-E3			
EE5	Coordination with releases from other water storage facilities? - for fisheries protection CVP facilities preventing straying of salmon and steelhead.	SP-E1; SP-F10			

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE6	Coordination and evaluation of DFG, USFWS, and other regulatory agencies release requirements to better fit with reality. High agency level decision.	SP-E1.2			
EE7	Potential to use support system models to evaluate different flow regimes with historic and real-time information.	SP-E1.2			
EE8	Why is there no requirement to maintain minimum emergency storage at Lake Oroville? (Evaluate needs related to other resources.)				The concept of carry over storage, i.e., storage reserved for use in a future year, is factored into the current operations at the Oroville Facilities.
EE9	Any plan to address increasing siltation in lake?	SP-G1			
EE10	Ramping rates effects on downstream facilities.	SP-E1.2			
EE11	Coordinate releases with other water storage facilities for flood release.	SP-E4			
EE12	Utilize current watershed hydrologic data from planning (coordinate with COE data gathering).	SP-E1			
EE13	Operational constraints as they relate to other resources and water supply.	SP-E1.2			
EE14	Potential physical changes to facility to increase storage and generation. Impacts to existing and potential facilities.	SP-E3;			

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE15	Evaluate temperature requirements and potential Eng. (?) operational modifications.	SP-E6; SP-E7; SP-E8; SP-E1.3; SP-E1.4; SP-E1.5			
EE16	Inequity of power pricing structure.			X	
EE17	Update flood operation manual	SP-E4			
EE18	What are 50-year projections for water/power demands and plans to meet those needs and impacts of meeting demands? (Context of existing full allocations.)				This information will be developed and included in FERC license application
EE19	Early warning system for downstream releases.	SP-E4			
EE20	Sale of existing water allotments to downstream users.			X	
EE21	Outflow impacts to downstream flood risk (levee stability) COE?	SP-E4			
EE22	Stability of Oroville levee system through low flow section and effects of high flow.	SP-E4			
EE23	Evaluate channel capacities and potential need for more storage / flood protection engineering and operations deflection into levees by gravel bars.	SP-E4			
EE24	What engineering or other reasonable and prudent solutions are available that would prevent the interbreeding of fall and spring-run Chinook salmon in the low flow section of the Feather River (migration barrier and /or flow and temperature changes in the low flow section)?	SP-E1.2			Engineering and Operations Work Group will support Environmental Work Group

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE25	Operations and engineering of the project determine the manner and extent water is moved into, through and out of the project area. Current operations, which affect timing, magnitude, and duration of flow from current release schedules, pump-back scheduling, and maintenance schedules impact both lotic and lentic ecosystems affected by the project. Operations need to be examined and their impacts evaluated and minimized for inclusion into terms and conditions of the settlement.	SP-E1.2; SP-F1			Engineering and Operations Work Group will support Environmental Work Group
EE26	Facility operations and impact – on bass fishery and spawning activities at Afterbay. (Protect and enhance bass fishery.)	SP-F3.1			
EE27	Sediments behind dam (operations).	SP-G1			
EE28	How do the pump-back operations during the summer months affect water temperatures required for holding and rearing of steelhead and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay?	SP-E8			
EE29	Project features and operations alter the hydrology of the system, creating the possibility for scour zones within both natural and designed channels. What affects do discharge and ramping rates have on substrate scour and the mobilization of sediments into the water column downstream? How have turbidity levels been affected by project operation?	SP-G2			
EE30	Alterations in stream hydrology affect the natural fluvial geomorphologic processes of a riverine system. How has the change in magnitude, frequency and timing of peak flows on the Feather River affected riparian vegetation recruitment in the low-flow reach and immediately downstream of the Afterbay?	SP-T3/5; SP-E1.6			

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE31	Impact of project facilities and operations on fish passage. This includes structures, flows and/or water quality conditions that impede or block passage within and from current and/or historic habitat and operations that impact passage or have the potential to enhance passage. Passage includes movement of spawning or holding adults, emigrating smolts, or movement of juveniles to different habitat areas for purposes of feeding, avoiding predators or sheltering.	SP-F15			
EE32	Adequacy of current in-stream flow requirements to conserve anadromous salmonids, their habitats and forage. This includes providing a range or schedule of flows necessary to optimize habitat, stable flows during spawning and incubation of in-gravel forms, flows necessary to ensure redd placement in viable areas, and flows necessary for channel forming processes, riparian habitat protection and maintenance of forage communities. This also includes impacts of flood control or other project structures or operations that act to displace individuals or their forage or destabilizes, scours, or degrades habitat.	SP-F10; SP-F16; SP-E1.2; SP-G2;			
EE33	Impact of hatchery facilities and/or operations on anadromous salmonids. This includes the direct, indirect and cumulative impacts of hatchery product on anadromous salmonids and the direct, indirect and cumulative impacts of hatchery facilities and operations on salmonids and their habitats.	SP-F9			
EE34	Project structures or operations that either have in the past or continue to introduce predators, create suitable habitat for predators, harbor predators, or are conducive to the predation of salmonids.	SP-F10; SP-F21			
EE35	Impact of project structures and operations on water quality conditions necessary to sustain anadromous salmonids and their habitats.	SP-W1; SP-F10			

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE36	Direct, indirect and cumulative impacts of project facilities and operations on sediment movement and deposition, river geometry, and channel characteristics. This includes impacts on stream competence, capacity, bank stability and extent, duration, and repetition of high flow events.	SP-G1; SP-G2			
EE37	One of the most significant environmental changes caused by the Oroville Facilities Project was changing the nature of this relatively low elevation waterway from a lotic to lentic system. The confluence of three tributaries of the Feather River and its free flowing nature has been replaced by Lake Oroville. The transport functions (sediment, nutrients etc.) normally associated with the energy of a lotic system have been replaced by an overall storage function of a lentic system. Thus, there are water quality changes accompanying this shift of ecosystems both within and downstream of the lake. The FWS is concerned about the effects of the current project operations on water quality and changes that may occur with new license conditions. We seek assurance that sufficient numbers of water quality constituents are investigated and that appropriate and rigorous protocols are followed. We seek assurance that investigations will lead to determination of operations alternatives that balance and maintain acceptable water quality standards under all operational plans and conditions set forth in the final agreement.	SP-W1; SP-W9			

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE38	As described in the IIP, operations of the Oroville Facilities including Lake Oroville, have wide-reaching effect on riverine conditions downstream in the Feather River, Sacramento River, and San Francisco/San Joaquin Bay Delta. In addition, water supply stored in Lake Oroville is delivered to Southern California through State Water Project canals and thus has effects on growth and development within the SWP service area. There are a variety of federally listed, threatened, proposed and species of concern that occur within and are supported by suitable habitat in the project affected area. There is potential for license condition changes that could potentially adversely impact listed, proposed, and/or species of concern in areas affected by water supply deliveries (including transfers), flood control, recreation activities and other project operations. The FWS wants to assure that future license conditions and attendant PM&E measures protect listed and proposed species, assist in their recovery and prevent future listings of any species of concern that may be at risk.	SP-T2; SP-F10			

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE39	As follow-up to the above paragraph, the operations of the Oroville Facilities are integrally linked to federal water project operations and those of other entities in the Central Valley. Coordinated decisions for water project operations, including Lake Oroville take place on a daily basis. FWS wants to assure that areal extent of investigation and content of the scope of analysis is sufficient so that ESA requirements are fully addressed with regards to direct, indirect, cumulative, interrelated and interdependent activities. This means examining all facets of project features such as distribution and transmission lines and how their operations/maintenance practices may affect T&E species. How do the pump-back operations during the summer months affect water temperatures required for holding and rearing of steelhead and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay?	SP-T2; SP-E8			

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE40	Does the increase in river water temperature that results from warmer Thermalito Afterbay releases during the spring, summer, and fall months limit the amount of suitable steelhead and salmon habitat in the river downstream of Thermalito Afterbay?	SP-E6			
EE41	Direct, indirect and cumulative impacts of project facilities and operations on sediment movement and deposition, river geometry, and channel characteristics. This includes impacts on stream competence, capacity, bank stability and extent, duration, and repetition of high flow events.	SP-G1; SP-G2			
EE42	Bedload transport, current condition of habitat potentially impacted by project and alternatives to conserve or enhance	SP-G2; SP-T3/5			
EE43	Adequacy of selective withdrawal structure to maximize water temperature for anadromous salmonids.	SP-E6; SP-E7; SP-E8; SP-E1.3			
EE44	Priority of salmonid habitat conservation in current operating criteria and various operating agreements.	SP-E2			Engineering and Operations Work Group will support the Environmental Work Group with modeling as necessary to evaluate flow scenarios
EE45	Introgression occurring between fall-run and spring-run Chinook populations in the Feather River due to hatchery practices and impassable migration barriers.				Transferred to Environmental Work Group; Engineering and Operations will provide modeling support as necessary.

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE46	At the first workgroup meeting, a presentation was given on how the water system works from reservoir to Southern California. A chart was shown on Oroville reservoir storage denoting the flood storage limits and elevations at time of year and downstream water requirements for the delta. In the presentation, it was said that the data and chart was from 1971 that DWR in Sacramento was using for those storage elevation levels and acre feet amounts. I question that information and sincerely hope that is not the case.	SP-E4			
EE47	In the FERC Part 12 guidelines, the Probable Maximum Flood (PMF) is to be examined after each major flood event. The Feather River has had two major flood events since 1971; once in February 1986 and again in January 1997. The FERC Part 12 regulation guidelines also state that when new Hydro-meteorological Reports (HMR's) are issued, the PMF is to be re-examined. New HMR's (HMR 58 & 59) were issued in 1999, thus precipitating the Oroville 2100 project to be re-examined in light of the new data. I think that this has been done for the 2100 project in the last Part 12 inspection and the Work Group should be given the correct data. If not done, the question is why not?	SP-E4			
EE48	The workgroup should be provided with the last FERC Part 12 inspection in written hard copy done by its Independent Consultant.				No study required. Report available to Work Group.
EE49	Oroville reservoir flood storage chart needs to be updated or obtain a copy of the latest updated chart to be provided to the Work Group.	SP-E4			

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE50	What is the Hazard classification for Oroville Dam?	SP-E4			The classification is "High Hazard."
EE51	Provide the Work Group with the study data done on installing Obermeyer Gates on the emergency spillway ogee to raise the reservoir elevation in a major flood runoff event? What is the probability of this installation?	SP-E4			
EE52	Provide the workgroup with the latest PMF, HMR, and PMP (probable maximum precipitation) data?	SP-E4			
EE53	When was the last "Inflow Design Flood" (IDF) study done and was it done on current data?	SP-E4			
EE54	Effect of tires in Parrish Cove and Bidwell Cove (mosquito abatement).				Resolved – ongoing maintenance under existing license
EE55	Effects of stakes used to hold down recycled Christmas trees on public safety.				Resolved – ongoing maintenance under existing license
EE56	Prepare flood inundation maps for a 1997(?) worst case with 300,000 cfs coming out of the dam's normal and emergency spillways. In 1997, it is believed that Oroville storage was almost to a point where the 300,000 cfs of inflow was going to pass through the reservoir. DWR was making plans to evacuate the power plant. The 300,000 would have topped the levees and put 10 feet of water into the town of Oroville.	SP-E4			
EE57	DWR should provide an operation model to each Work Group that allows for alternative evaluation.	SP-E2			Comment 05-01 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Engineering and Operations Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
EE58	All of these proposed (operations) actions to be evaluated have the potential to impact recreation programs and facilities at the Reservoir, the Diversion Pond, the Afterbay, the Forebay and the river channel. This study should be expedited so models can be developed to which the Work Groups can relate and evaluate potential impacts and mitigations relative to existing and proposed recreation programs/facilities.	SP-E1; SP-E2			Comment 05-15 and 05-120 from Draft SD1, Appendix C

LAND USE, LAND MANAGEMENT, AND AESTHETICS

Draft SD1 Appendix B Reference #	Land Use, Land Management, and Aesthetics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
LUE1	Develop more areas for recreation.	SP-L1; SP-R17			
LUE2	Develop land access to far north side of lake.	SP-L1; SP-R1			
LUE3	Increase communication on issues relating to present DWR land usage around the lake area so it shifts from unused to recreational or appropriate public use.	SP-L1			
LUE4	Contact PG&E regarding property at Lime Saddle Marina, the 5 plus acres to add more parking available to public and add much needed road and entrance.	SP-L1			
LUE5	Look at all PG&E lands adjacent to project.	SP-L1			
LUE6	Forbid industrial use of State recreation lands.			X	
LUE7	Preservation of open/natural areas/greenbelts.	SP-L1			
LUE8	There is an interest in integrating recreation opportunities provided by the reservoir with those that could occur on adjacent national forest system lands. Uses need to be complementary with no unmitigated impact on heritage resources, and little if any impact on aquatic and terrestrial wildlife habitat or vegetative productivity. Opportunities could include boat in camping sites, trails from the reservoir to points of scenic or other interest and improvement of existing road access to the reservoir.	SP-R12			

Draft SD1 Appendix B Reference #	Land Use, Land Management, and Aesthetics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
LUE9	Potential for acquisition of federal lands (BLM and USFS) within project boundary by DWR.	SP-L1			
LUE10	Potential for DWR to sell, for private development, some lands currently held by the State. This would get the lands back on tax rolls.	SP-L1			
LME1	Evaluate existing facilities security. Lake security and fines – “user friendly”.	SP-L2; SP-R2			
LME2	Evaluate unpaved status of RR grade multi-use trail	SP-R17			
LME3	Immediate access by public vehicles at Lakeland Boulevard to the old railroad grade area of the diversion pool with future consideration of improvements in that same area.	SP-R1			Lakeland Blvd Access is an Interim Recreation Project
LME4	Are additional funds needed to augment the existing budget for the management of the Oroville Wildlife Area? Presently available Fish and Game funds are being dedicated to managing people and not wildlife habitat.	SP-L2; SP-R5; SP-T6; SP-T9			
LME5	Are additional funds needed for law enforcement? Presently two-thirds of all the local game warden activities are spent on the Oroville wildlife area. An augmentation of funding for more wardens would free up time for other law enforcement activities outside of the wildlife area.	SP-L2; SP-R2			
LME6	Fuel load on state lands – potential impact to habitat (wildlife and human)	SP-L5; SP-T11			

Draft SD1 Appendix B Reference #	Land Use, Land Management, and Aesthetics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
LME7	There is an interest in management of national forest system lands located within and adjacent to the project area within the framework of the Forest Plan Amendment EIS. Management could include establishment of Defensible Fuel Profile Zones, prescribed burning or other activities compatible with the EIS.	SP-L5; SP-T11			
LME8	There is an interest in reviewing the arrangement to defer recreation management to the California Department of Parks and Recreation for the purpose of determining whether to continue, modify or terminate this agreement. The arrangement if continued needs to be formally documented and updated to reflect current management direction.	SP-L2; SP-R5			
LME9	Commercial cattle grazing: return to project and impact to natural environment	SP-L1			
LME10	Consequences on natural environment and adjacent land of fuel loading (current fire management practices)	SP-L5; SP-T11			
LME11	Comply with the Executive Orders 111988, Floodplain Management, and 11990, Protection of Wetlands	SP-T3/5			
LME12	Use site specific, integrated pest management approach to control forest pests, employing mechanical, cultural, biological, and/or chemical methods based on effectiveness, cost-efficiency, and protection of human health and environmental quality	SP-L2			
LME13	Water releases from Oroville Dam and downstream impacts (vegetation and properties)	SP-T3/5; SP-G2			
LME14	Evaluate fuel loading in areas within the project area, including land along the Feather River below Oroville Dam through the Long Bar area and land near the Diversion Dam.	SP-L5; SP-T11			

Draft SD1 Appendix B Reference #	Land Use, Land Management, and Aesthetics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
LME15	Install warning system for water releases.	SP-R2			Warning system is an Interim Recreation Project
LME16	Provide an emergency boat for CDF	SP-R2			
AE1	Need to establish debris collection program on regular schedule	SP-L4			
AE2	Remove old railroad trestle and other debris from river.	SP-L4			
AE3	Clean up shoreline, particularly adjacent to camping and public access areas. Use county prisoner-release programs, if necessary, to maintain clean shorelines.	SP-L4			
AE4	Remove concrete and construction debris in Feather River including below the Fish Barrier dam, below the Table Mountain Bridge, below the Hwy 70 Bridge.	SP-L4			
AE5	Dump areas used by DWR need to be removed.	SP-L4			
AE6	Lake levels sink too low in the summer – ‘bathtub ring’	SP-L4			Lake Oroville is a reservoir designed to operate at fluctuating water levels.
AE7	Camouflage the power line towers	SP-L4			
AE8	Improve poorly maintained visitor center	SP-L4			
AE9	Expand use of “low impact” signs	SP-L4			
AE10	Consider potential projects that could affect aesthetic nature of the project.	SP-L4			

Draft SD1 Appendix B Reference #	Land Use, Land Management, and Aesthetics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
AE11	Day use park: water lines in the south side of the river between the Fish Barrier Dam and the Diversion Dam need to be installed to irrigate plantings	SP-R17			Improving Day Use Parks are Interim Recreation Projects
AE12	Native plant landscaping (potential sites: Feather River fish Hatchery, State Parks Headquarters, DWR Field Office, Spillway Launch Facility - future) and restoration of native plant communities.	SP-L4			
AE13	Replace landscaping at the Feather River Fish Hatchery and adjacent river areas.	SP-L4			Fish Hatchery landscaping is an Interim Recreation Project
AE14	Clean up old 'City' park adjacent to the north side of the Fish Barrier Dam, just north of the Fish Hatchery. Taken over by DWR when SWP was constructed, never re-opened. Provide picnic areas and restroom facilities. Turn over to City of Oroville.	SP-R17			
AE15	Create work team to remove invasive, non-native plants (List A and B) from SWP and DWR areas.	SP-L4			Improving Day Use Parks are Interim Recreation Projects
AE16	Re-seed face of Oroville Dam and perimeter of reservoir exposed during drawdown.	SP-L4			Re-seeding the face of Oroville Dam is an Interim Recreation Project

CULTURAL RESOURCES

Draft SD1 Appendix B Reference #	Cultural Resources Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
CRE1	Protect all cultures' cultural resources (including but not limited to: Indian burial sites, sacred sites, massacre sites, co-habitation sites, trails, etc.) within the Project boundary area.	SP-C1			
CRE2	Hunting and fishing rights, traditional fishing activities, and water rights are gone – evaluate impact of project on those	SP-C1			
CRE3	Need to involve all Tribes, not just federally recognized ones	SP-C1			
CRE4	Develop Heritage Village	SP-C4			
CRE5	Protection of cultural sites along RR grades	SP-C3			
CRE6	Add island off eastern side of Nelson Bar Road as a historical area.	SP-C1			
CRE7	Need more cultural education in the area affected by the project. Develop a fund for community education to resolve disputes between various groups and create better understanding.	SP-C4			
CRE8	When considering cultural endeavors, achieve equal opportunity for all people	SP-C1; SP-C2; SP-C3			
CRE9	Cultural resources that lie beneath the reservoir need to be considered for protection	SP-C1; SP-C2; SP-C3			
CRE10	Tribes want input on all issues and want to be actively involved in this process				Maidu Advisory Council

Draft SD1 Appendix B Reference #	Cultural Resources Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
CRE11	Desire jobs and training for tribal members on this project				Local Native American community members have been trained and are actively involved in studies.
CRE12	Complete area needs to be surveyed- area within the Project boundary including land within the fluctuation zone.	SP-C1			
CRE13	Unfinished reports should be brought up to date first.	SP-C1			
CRE14	Butte County State collections need to be located and returned to the county and any further work done on the collection should be done within the county. Develop a curator facility for all tribes to use that could house all the collections and investigate possible loan from Smithsonian.	SP-C1; SP-C2; SP-C3; SP-C4			
CRE15	Develop collection policy to evaluate 'in-place' artifacts (on case by case basis)	SP-C1; SP-C2; SP-C3			
CRE16	Local schools and tribal members should have access to artifacts for educational purposes	SP-C4			
CRE17	Burial and other tribal lands set aside for protection of past and use for future (State and/or BLM lands). Set aside land for repatriation and future use (consider State and/or Federal lands).	SP-C1; SP-C2; SP-C3			
CRE18	Local members of the Native Tribal community that contribute to information should be compensated				The compensation issue is resolved.
CRE19	Want artifacts that are found to stay in the community	SP-C1; SP-C2; SP-C3			

Draft SD1 Appendix B Reference #	Cultural Resources Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
CRE20	Re-burial of exhumed bodies currently stored in West Sacramento; funding needed for transportation, land and assistance to cover costs of re-burial	SP-C1; SP-C2; SP-C3	X		Repatriation discussions underway
CRE21	Area 1 is rich with cultural resources and prime location for preservation. Concerned that increased recreational activities in the area is in conflict with protection of cultural resources	SP-C1; SP-C2; SP-C3			
CRE22	Support protection – want to see preservation of cultural resources and don't want to see them lose their identity (physical and knowledge identity)	SP-C1; SP-C2; SP-C3			
CRE23	Concerns for repatriation		X		Repatriation discussions underway
CRE24	Consider issues on a watershed level, involve all tribes	SP-C1; SP-C2; SP-C3			
CRE25	Concerned about Area 2 development – extension and potential impacts to cultural resources in area	SP-C1; SP-C2; SP-C3			
CRE26	Water drawdown (particularly bad this year) has exposed sites which are then subjected to vandalism. Concerned that County is not prosecuting offenders.	SP-C1; SP-C2; SP-C3			
CRE27	Desire to see development of a Maidu cultural center with access for all to the center.	SP-C4			
CRE28	There is an interest in inventorying heritage resource and traditional gathering sites located on state, Federal and PG&E lands located within and adjacent to the project and determining the risk posed to these sites from project operations, future development or vandalism. The inventory should also include a plan to conserve at-risk sites.	SP-C1; SP-C2; SP-C3			

Draft SD1 Appendix B Reference #	Cultural Resources Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
CRE29	Culture - bearers that contribute to information should be compensated				The compensation issue is resolved.
CRE30	Consider changing name of the Lime Saddle campground and potential cultural center there.	SP-C4			
CRE31	Interest in performing DNA testing to determine tribal relationships (tribe by tribe decision) (molecular level)	SP-C2			
CRE32	Ethnographic work done on cultural resource elders (post 1950's and 60's)	SP-C1; SP-C2			
CRE33	Beckwourth trail and Robinson's Corner	SP-C1			
CRE34	Survey Indian trails and their significance (migration and local use trails)	SP-C1			
CRE35	History and historical archeology need to be addressed	SP-C1			
CRE36	Consider extension of Berry Creek Rancheria to include river corridor to Bald Rock Dome	SP-C1; SP-C3	X		
CRE37	Preservation and interpretation of historic mining and ranching sites	SP-C1; SP-C3			
CRE38	Public education to combat vandalism of sites.	SP-C1; SP-C2; SP-C3			
CRE39	Ownership map showing lands purchased by state during facility construction				GIS output
CRE40	Establish ecological, paleontological and environmental baseline for cultural resource studies	SP-C1			

Draft SD1 Appendix B Reference #	Cultural Resources Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
CRE41	Consider fuel loading (CDF) and wildlife management activities on cultural resources particularly in Area 3.	SP-L5; SP-T11			Coordinate with Land Use and Environmental Work Groups
CRE42	Identify and set aside new traditional gathering sites	SP-C1; SP-C2; SP-C3			
CRE43	Land for Ishi monument	SP-C3			
CRE44	Finish Maidu village display at the visitor center	SP-C3			
CRE45	Inundation and debris study and impacts to cultural resources in shoreline and fluctuation zone.	SP-C1; SP-C2; SP-C3			
CRE46	Tribe (Mooretown) wants permanent full-time State Archaeologist at Oroville who would preferably work for Department of Water Resources.			X	
CRE47	Complete the Maidu Culture Exhibit at the Visitors Center	SP-C3			
CRE48	Move the Jim Bechwourth exhibit to another place in the Visitors Center. It now appears to be part of the world of the Maidu people exhibit and that is inappropriate. He was a famous black trapper, scout, pioneer settler in 1850's California and founder of the wagon trail pass, now Highway 70.	SP-C1; SP-C3		X	
CRE49	Funds to finish the Maidu Diorama at the Lake Oroville Visitor Center	SP-C3			

Draft SD1 Appendix B Reference #	Cultural Resources Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
CRE50	Have State Archaeologist work under DWR instead of DPR. I, (Bruce Steidl) and the Tribe would want the best environment for our contact during the relicensing process and the years to come. DPR is constantly having problems with funding for positions.			X	
CRE51	In the IIP, page 244, 5 th paragraph down states the Stage 2 Survey may include a comprehensive on foot inventory of impact areas that have a reasonable possibility for containing sites. We ask for nothing less than 100% inventory when physically able to do so. This includes under the high water level as well. To not do this would be negligent.	SP-C1			
CRE52	Define legal and fiscal responsibility for archaeological and other cultural resource protection/preservation: land owner (DWR) vs land management agency (DPR). What recommendations have been made to protect cultural resources throughout the past 36 years and what has been done to carry out/fund these recommendations. How much has been spent over the past 36 years to protect cultural resources and assurance that whatever is developed here will have adequate funding for the future. Lack of stable funding source for cultural resources (protection, curation, position at facility). Conditions of existing license.	SP-C1; SP-C2; SP-C3			
CRE53	Definition of Area of Potential Effect (APE) for project. Ownership map that shows all state land in vicinity of DWR defined project area that were acquired as a result of the project. Lake Davis, Frenchman Lake, Antelope Lake dams: built for State Water Project at same time as Lake Oroville dam: what is their relationship to this project.	SP-C1			
CRE54	Difference of cultural resource protection within state park units. On OHV parks, vehicles are not allowed to drive on archaeological resources; why are vehicles allowed to drive over and damage archaeological sites during reservoir drawdown?	SP-C3			

Draft SD1 Appendix B Reference #	Cultural Resources Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
CRE55	Traditional land management practices need to be incorporated into areas that are defined as traditional Cultural Properties/gathering areas.	SP-C1; SP-C2; SP-C3			
CRE56	DPR NAGPRA inventory for archaeological collections only, ethnographic objects collected in the Lake Oroville area during project activities need to be inventoried in a searchable database that includes provenience information. Current software (ARGUS) is not available to researchers and DPR staff is unable to search by provenance information.	SP-C1; SP-C2			
CRE57	Find, reanalyze, and repatriate to Butte County all collections that are part of all project activities (i.e. looking at UCLA, ARC, Chico State, Sacramento State, Markley's mid-70's excavations).	SP-C1	X		
CRE58	Loss of Traditional Cultural Landscape and activities. Cultural identity damaged.	SP-C1			
CRE59	I would request the restoration and maintenance of historical springs. I think mainly of those near the lake. One is near where Area 4 is under water. One is on Area 5. This one is still running, producing nearly pure spring water. The other needs repair. The third one which is very historical and important to me is the Area 6 mineral spring on Area 7.	SP-C1; SP-C2; SP-C3			
CRE60	Display shelters and information panels regarding cultural resources should be erected in various locations throughout the State Recreation Area	SP-C1; SP-C2; SP-C3			Comment 03-01 from Draft SD1, Appendix C
CRE61	Signage regarding the protection of cultural resources needs to be evaluated and appropriate signs erected at various areas in the State Recreation Area	SP-C3; SP-C4			Comment 03-02 from Draft SD1, Appendix C
CRE62	Funding needs to be provided to expand the Site Stewardship program at the State Recreation Area	SP-C4			Comment 03-03 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Cultural Resources Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
CRE63	Funding needs to be provided to redo the interpretive exhibits in the Department of Parks and Recreation section of the Lake Oroville Visitor Center, or a new Visitor Center with all new exhibits should be constructed.	SP-C4			Comment 03-04 from Draft SD1, Appendix C
CRE64	The interpretive exhibits in the Bidwell Bar Tollhouse need to be improved.	SP-C4			Bidwell Exhibit is an Interim Recreation Project Comment 03-05 from Draft SD1, Appendix C
CRE65	An archaeology lab/curatorial facility needs to be established, possibly in conjunction with a new Visitor Center.	SP-C4			Comment 03-06 from Draft SD1, Appendix C
CRE66	Tribal Cultural Center alternative site study (Solicit cultural Resources Work Group recommendation)	SP-C4			Comment 05-102 from Draft SD1, Appendix C
CRE67	Foreman Creek: Design and install barriers to protect native American sites.	SP-C3			Comment 02-04 from Draft SD1, Appendix C
CRE68	Historical tour study of Old Oroville cultural sites linked to Diversion Pool through Old Oroville to Regional Visitor Center and Tribal Cultural Center.	SP-C3			Comment 05-105 from Draft SD1, Appendix C

ENVIRONMENTAL – WATER QUALITY

Draft SD1 Appendix B Reference #	Water Quality Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
WE1	Look at project effects on all designated beneficial uses of the waterway	SP-W1			
WE2	Water quality objectives, including levels for bacteria, chemical constituents, dissolved oxygen, pH, oil and grease, pesticides, sediment, temperature, toxicity, and turbidity will be evaluated for compliance with the Basin Plan standards	SP-W1			
WE3	General concerns include all parameters of water quality as flow enters the project boundaries, passes through facility features, and discharges downstream. Direct and indirect effects of the project on aquatic ecosystem health, on recreational opportunity, and on domestic and agricultural supply will be considered	SP-W1; SP-W9			
WE4	Specific issues will need to be addressed for the issuance of 401 Certification and for disclosure in the Applicant Prepared Environmental Assessment	SP-W1			
WE5	Proximity of project features and recreational facilities to shoreline and banks of water bodies offers potential for introduction of nutrients and bacterial contaminants to these waters. What are the water quality trends (including, but not limited to, nitrogen, phosphorous and coliform bacteria levels) associated with project related activities	SP-W3			
WE6	Fuel use at marinas – Floating gas tanks and sewer tanks	SP-W3			
WE7	Lake Oroville, fed by tributaries that have a history of gold mining activity, has potential for accumulation of elemental mercury in its basin sediments. Potential presence and uptake of methylmercury through the food chain must be assessed	SP-W2			

Draft SD1 Appendix B Reference #	Water Quality Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
WE8	Provide protection of riparian areas and water quality by limiting disturbance in streamside management zones according to ground slope and stability, stream class, channel stability, fishery, and other beneficial uses, and favor riparian-dependent resources in cases of competing resource demands	SP-W7; SP-W9			
WE9	Encourage natural protective processes.	SP-W9			
WE10	Maintain or improve water quality to protect beneficial uses and meet or exceed State objectives.	SP-W1; SP-W9			
WE11	Avoid water quality degradation by using Best Management Practices during land management activities, and reduce sedimentation and channel erosion by rehabilitating deteriorating watersheds	SP-W7; SP-W9; SP-T10			
WE12	Coordinate with counties, Cal-Trans, and the Union Pacific Railroad to eliminate the sidecasting of waste material along travel ways, except at designated locations	SP-W7; SP-W9; SP-T10			
WE13	Reduce sediment yields from watersheds in deteriorating conditions and those tributary to eroding channels or hazardous flood prone areas	SP-W2; SP-W7; SP-W9			
WE14	Do analysis and mitigation on a watershed basis	SP-W7; SP-W9			
WE15	Cooperate with local, State, and Federal agencies as well as private landowners in long-range watershed planning. Use an interdisciplinary approach.	SP-W7; SP-W9; SP-T10			
WE16	Depth and capacity of the Oroville reservoir creates a thermally stratified condition. What is the cold-water pool retained in the basin and what is its availability for release in various water year types	SP-W6; SP-E1.3; SP-E7			

Draft SD1 Appendix B Reference #	Water Quality Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
WE17	Water temperatures are an issue of concern for both aquatic resources and agricultural interests. Temperature monitoring is ongoing, and plans are to examine how specific water releases and operations will affect temperatures in the river, Afterbay, and hatchery	SP-W6; SP-E1.4; SP-E1.5			
WE18	Are the existing temperature requirements defined under the State Water Projects Feather River Flow Constraints being met and are they adequately protecting steelhead and fall, late-fall, and spring-run chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay outlet	SP-W6; SP-E1.5; SP-E6			
WE19	Is the availability of a cold-water pool in Lake Oroville adequate under present and future operational demands to meet the existing downstream cold fresh-water habitat requirements of steelhead and fall, late-fall, and spring-run chinook salmon	SP-W1; SP-W6; SP-E1.3; SP-E1.4; SP-E1.5; SP-E7			
WE20	Are the existing temperature requirements defined under the State Water Projects Feather River Flow Constraints adequate for the operation of the Feather River Hatchery	SP-W6; SP-F9			
WE21	Is the availability of a cold-water pool in Lake Oroville adequate under present and future operational demands to meet the cold-water requirements defined under the State Water Projects Feather River Flow Constraints for the Feather River Hatchery	SP-W6; SP-F9			
WE22	Does the existing Temperature Control Device (TCD) in Lake Oroville provide adequate access to the cold-water pool during below normal water or drier years	SP-W6; SP-E1.3; SP-E7			
WE23	Will the existing TCD in Lake Oroville provide adequate access to the cold-water pool under future operational demands particularly during a series of dry and critically dry years	SP-W6; SP-E1.3; SP-E7			

Draft SD1 Appendix B Reference #	Water Quality Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
WE24	Warm water release requirements for agricultural production	SP-W1; SP-W6; SP-E1.4			
WE25	Does the present temperature model have the ability to forecast average daily water temperatures, under present and future operational demands, in the low-flow channel and in the river from the Thermalito Afterbay outlet down to Verona	SP-W1; SP-W6; SP-E1.5			
WE26	How does the Feather River Hatchery requirement for warmer water in the summer impact river water temperatures required for holding or rearing of steelhead and spring-run chinook salmon in the low-flow section? That is, should the hatchery water come directly from Lake Oroville rather than from the river at the Fish Barrier Dam in order that both hatchery and river temperature needs can be satisfied	SP-F9; SP-W6			
WE27	How does the pump-back operation during the summer months affect water temperatures required for holding and rearing of steelhead and spring-run chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay	SP-W6; SP-E8			
WE28	Does the increase in river water temperature that results from warmer Thermalito Afterbay releases during the spring, summer, and fall months limit the amount of suitable steelhead and salmon habitat in the river downstream of Thermalito Afterbay	SP-W6; SP-E1.3; SP-E1.4; SP-E1.5			
WE29	Does the increase in river water temperature that results from warmer Thermalito Afterbay releases during the spring and early summer months affect survival of salmonid species outmigrating from the Feather and Yuba River	SP-W6; SP-E6; SP-E1.3; SP-E1.4; SP-E1.5			

Draft SD1 Appendix B Reference #	Water Quality Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
WE30	Are dissolved oxygen levels in the Feather River from Thermalito Afterbay to Live Oak a problem during the spring, summer, and fall months	SP-W1			
WE31	How have turbidity levels been affected by project operation	SP-W1			
WE32	Thermalito Afterbay acts as a thermal retention basin for project water prior to delivery to water districts outside the project boundary. How do releases from this water body affect the stream temperature and dissolved oxygen content of Feather River receiving waters.	SP-W1; SP-W6; SP-E6; SP-E1.3; SP-E1.4; SP-E1.5; SP-E2			
WE33	Relationship between hatchery and water quality	SP-W1; SP-F9			
WE34	Effect on water quality of livestock grazing	SP-W7			
WE35	Water contamination at North Forebay related to swimming opportunities	SP-W3			
WE36	Both cold-water and warm-water habitat, spawning, and migration uses have been designated for surface waters potentially affected by the project. A determination must be made as to the specific thermal habitat that may be reasonably provided in each water body within project boundaries and downstream of the project	SP-W1			
WE37	Dredging of lower river to make suitable fish habitat	SP-W1; SP-F3.2			
WE38	Floating septic tanks	SP-W3			

Draft SD1 Appendix B Reference #	Water Quality Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
WE39	Effects of boating on MTBE	SP-W3			
WE40	Minimum level of draw-down effect on water temps	SP-E1.3; SP-E1.4; SP-E1.5; SP-W6			
WE41	What coordination for Page 2 #5? -- Could be items along roads that might sweep into the river during floods.	SP-W2; SP-W7			
WE42	Floating restrooms, houseboat gray water tanks and pump out facilities effects on water quality	SP-W3			
WE43	Sewage spills into Lake Oroville	SP-W3; SP-W7			
WE44	Fuel spills as a result of fluctuating lake levels	SP-W3; SP-W7			
WE45	Effect on water quality from boat maintenance and cleaning products -- "biodegradable"	SP-W3			
WE46	Spawning habitat in tributaries as they relate to operations	SP-W1; SP-F3.1			
WE47	Effects of lake level changes on cultural resources due to water quality contaminants	SP-W1; SP-W2; SP-C1			
WE48	Macroinvertebrates as an indicator of water quality	SP-W1; SP-W2			
WE49	Project effects, by water type year and season, on natural hydrology, and restoration of a more natural hydrograph	SP-W9			

Draft SD1 Appendix B Reference #	Water Quality Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
WE50	Conversion from lotic to lentic environment and accompanying changes in water quality	SP-W1; SP-W2			
WE51	Potential risk of non-project-related toxic spills and effects of toxic spills on project waters	SP-W7			
WE52	Cumulative effects of project operations and other past, present and reasonably foreseeable actions on water quality.				Will be addressed within cumulative impact analysis as required by NEPA/CEQA.
WE53	Consider water quality downstream of Oroville facilities and the effect of low flows on dilution of contaminants entering the Feather River downstream	SP-W1; SP-W2			
WE54	Impact of project structures and operations on water quality conditions necessary to sustain anadromous salmonids and their habitat. Adequacy of current project operating regimes and structures to optimize water quality conditions for anadromous salmonids and their habitats.	SP-W1; SP-W6			
WE55	Effects of reservoirs and Feather River downstream of Oroville Dam on groundwater quality and quantity (e.g. hyporheic zone interaction)	SP-W5			
WE56	Evaluate the water supply for the Feather River Hatchery, include any water quality problems	SP-W1; SP-F9			Comment 06-22 from Draft SD1, Appendix C

ENVIRONMENTAL – TERRESTRIAL

Draft SD1 Appendix B Reference #	Terrestrial Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
TE1	Efficiently manage recreation in the LOSRA	SP-R5; SP-L2; SP-T9			
TE2	Maintain winter habitat for band-tailed pigeons	SP-T1			
TE3	Maintain or enhance deer winter range	SP-T1; SP-W7			
TE4	Provide suitable bald eagle foraging habitat along the North Fork upstream from Lake Oroville	SP-T2			
TE5	Use site-specific, integrated pest management approach to control forest pests, employing mechanical, cultural, biological, and/or chemical methods based on effectiveness, cost-efficiency, and protection of human health and environmental quality	SP-W7			
TE6	Re-vegetate disturbed areas within floodplains to stabilize soil, benefit fish and wildlife, and restore the natural flood control qualities	SP-T3/5; SP-W9			
TE7	From January through August limit activities within active Bald Eagle nesting territories	SP-T2			
TE8	Between November 1 and March 31 limit activities within winter Bald Eagle roost habitat	SP-T2			
TE9	Water releases from Oroville Dam and downstream impacts (vegetation and properties)	SP-T3/5; SP-G2			
TE10	Continue cooperation allowing the CDPR to manage the reservoir area including Plumas National Forest lands	SP-T6; SP-W7			

Draft SD1 Appendix B Reference #	Terrestrial Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
TE11	Encourage species recovery	SP-T2			
TE12	Develop plans for each Bald Eagle nesting territory; perform habitat improvement projects to enhance bald eagle nesting, roosting or foraging habitat	SP-T2			
TE13	Have adequate surveys been completed to determine what State or federally listed species (plant and animal) are potentially being impacted by project operations	SP-T2			
TE14	Map plant and wildlife habitat communities	SP-T4			
TE15	Inventory and monitor State and federal protected and sensitive plant and wildlife species	SP-T2			
TE16	Provide habitat leading to viable populations of endangered species	SP-T2			
TE17	Maintain habitat to support viable populations of all native and desired nonnative vertebrate species	SP-T1; SP-T2; SP-T8			
TE18	Improve and protect habitat for designated emphasis and harvest species	SP-T1; SP-T8			
TE19	Provide diversity of plant and animal communities and tree species by assuring the continuous and viable presence of all seral stages of all native plant communities on the forest	SP-T1; SP-T2			
TE20	Provide a diversity of vegetation types and habitat to support viable populations of all fish, wildlife, and plant species	SP-T1; SP-T2; SP-T10			

Draft SD1 Appendix B Reference #	Terrestrial Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
TE21	Maintain and enhance the suitability of currently occupied nest territories, and provide sufficient potential nesting, foraging and winter habitat to meet recovery goals of the Pacific States Bald Eagle Recovery Plan	SP-T2			
TE22	At a minimum, provide habitat sufficient to maintain existing Bald Eagle populations	SP-T2			
TE23	Minimize adverse impacts to riparian resources through appropriate mitigation	SP-T3/5			
TE24	Facilitate hydroelectric development that provides protection of riparian resources				No additional hydroelectric development is currently planned at the Oroville Facilities
TE25	Maintain viable populations of sensitive plant species. Protect sensitive and special interest plant species, as needed, to maintain viability.	SP-T2			
TE26	Are additional funds needed to augment the existing budget of the Oroville Wildlife Area? Presently available Fish and Game funds are being dedicated to managing people and not wildlife habitat	SP-R5; SP-T6; SP-T9			
TE27	Various recreational and public use facilities were designated as mitigation measures to minimize impacts resulting from the original Oroville Project construction. The licensee should provide a complete inventory of recreational mitigation obligations required by Articles of the existing FERC License, and should clearly disclose the current status of compliance with those measures				DWR is in compliance with existing FERC license articles.
TE28	Manage the Wild and Scenic Zones of the Middle Fork of the Feather River consistent with the Wild and Scenic Rivers Act				Outside FERC Project boundary

Draft SD1 Appendix B Reference #	Terrestrial Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
TE29	Interaction of lake with wildlife species (birds, amphibians, etc.) – how is lake used	SP-T1; SP-T3/5			
TE30a	Inventory and map alien plant and animal species	SP-T4; SP-T7; SP-T8			
TE30b	There is an interest in determining locations of noxious weeds within and adjacent to the project area and determining control and eradication measures as needed. Inventory plants located on National Forest system lands within and adjacent to project facilities as well as the perimeter of Lake Oroville. Survey for California Department of Food and Agriculture Category A, B and C noxious weeds.	SP-T7			
TE31	Remove non-native plant species around lake, river, forebay and afterbay areas especially star thistle, ailanthus, and other invasive plant species	SP-T7			
TE32	DWR and DFG to work cooperatively to preserve hunting and fishing opportunities in the afterbay and borrow areas, and Lake Oroville	SP-T6; SP-T9			
TE33	Fuel load on state lands – potential impact to habitat (wildlife and human)	SP-T11; SP-L5			
TE34	Favor riparian dependent resources and limit disturbance in all riparian areas including riparian and aquatic ecosystems, wetlands, stream banks, and floodplains	SP-T3/5; SP-W9			
TE35	Favor riparian resources over other resources, except cultural resources, in cases of conflict				Position. FERC will balance the resource needs during consideration of license application.

Draft SD1 Appendix B Reference #	Terrestrial Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
TE36	Manage the Feather Falls Scenic Area as a Semi Primitive Non Motorized area				Outside FERC Project boundary
TE37	Assure adequate protection of riparian area for Wildlife and fish resources	SP-T3/5			
TE38	Evaluate and mitigate bank swallow habitat impacts (threatened)	SP-T2			
TE39	Manage flows and/or reservoir storage to maintain or enhance riparian plant communities and habitat for all life stages of fish. Cooperate with local, State, and other Federal water management agencies. Protect riparian areas while providing developed facilities	SP-T1; SP-T3/5; SP-F16			
TE40	Native plant landscaping (potential sites: Feather River fish Hatchery, State Parks Headquarters, DWR Field Office, Spillway Launch Facility - future) and restoration of native plant communities.	SP-T3/5; SP-T10			
TE41	North Forebay – preservation of existing wildlife	SP-T1			
TE42	Include aquatic species of non-native plants	SP-T7			
TE43	Improve access to all areas in the Afterbay and barrow area	SP-R1			
TE44a	Preserve wildlife habitat in the diversion pool area	SP-T1			
TE44b	Trespass, grazing leases, acquisition of additional land within the project boundary for wildlife management	SP-L1; SP-L2; SP-T6; SP-W7			
TE45	ESA compliance, want to hear about conflicts with folks and other species (bald eagles)	SP-T2			
TE46	Improve terrestrial habitat with introduction of salmon (bears)	SP-T1			

Draft SD1 Appendix B Reference #	Terrestrial Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
TE47	Continue inventory of plant and animal species in the project area	SP-T1; SP-T4			
TE48	Protect riparian habitat in project area	SP-T3/5			
TE49	Responsible management by resource agencies	SP-T6; SP-R4			
TE50	Effects of fluctuating water levels in Afterbay on wildlife	SP-T1; SP-T3/5			
TE51	Restoration of areas used as stockpile sites during dam construction	SP-L4			
TE52	Evaluate quality of vernal pools in the project boundary and project operation on health/quality of pools	SP-T3/5			
TE53	Biological Evaluation of species of concern from BLM and USFS (Plumas and Lassen NF) perspective Surveys should include Region 5 Sensitive plant and animal species as well as Plumas National Forest Special Interest plant species.	SP-T2			
TE54	Evaluation of funding adequacy for Oroville Wildlife Area	SP-T6; SP-R5			
TE55	Evaluation of funding adequacy for law enforcement	SP-T6; SP-R2; SP-R5; SP-L2			
TE56	Adequacy of survey information to document the presence of state or federally listed plant or animal species that are potentially impacted by project operation	SP-T2			
TE57	Effects of reservoir surface elevation fluctuations on wildlife habitat	SP-T1			

Draft SD1 Appendix B Reference #	Terrestrial Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
TE58	Effects of changes in the magnitude, frequency and timing of peak flows in the Feather River on riparian vegetation recruitment in the low flow reach and immediately downstream of the Afterbay	SP-T3/5; SP-G2			
TE59	Operate water levels in Thermalito Afterbay to prevent adverse impacts to Pacific Flyway waterfowl, especially during nesting in spring and early summer; continue to coordinate with DFG	SP-T1; SP-T2			
TE60	Evaluate effects of proposed increases in recreational activity in Thermalito Afterbay on waterfowl and other wildlife	SP-T1; SP-T2; SP-T9; SP-R4			
TE61	Project effects on downstream riparian habitat and the reservoir shoreline, including on-going effects of reservoir operations and recreational uses; effective stabilization, restoration and enhancement measures	SP-T3/5			
TE62	Protection and sustained conservation of terrestrial wildlife and flora in the project-affected area; comprehensive and well-crafted planning	SP-T2; SP-T10			
TE63	Effects of existing and future project features, operations and maintenance on upland habitat, including revegetation and restoration efforts	SP-T1; SP-T9; SP-T10			
TE64	Effects of existing and future fire prevention/fuel load control on natural communities.	SP-T11			

ENVIRONMENTAL – GEOLOGY, SOILS AND GEOMORPHIC PROCESSES

Draft SD1 Appendix B Reference #	Geology, Soils and Geomorphic Processes Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
GE1	As needed, remove excavated material from the floodplain	SP-G2; SP-W7			
GE2	Project features and operations alter the hydrology of the system, creating the possibility for scour zones within both natural and designed channels. What effects do discharge and ramping rates have on substrate scour and the mobilization of sediments into the water column downstream	SP-G1; SP-G2; SP-E1.2; SP-E1.6			
GE3	Alterations in stream hydrology affect the natural fluvial geomorphologic processes of a riverine system. How has the change in magnitude, frequency and timing of peak flows and rates of flow change on the Feather River affected riparian vegetation recruitment in the low-flow reach and immediately downstream of the Afterbay, under wet and dry year criteria	SP-G2; SP-T3/5; SP-W9			
GE4	Under existing conditions, are bankfull flows frequent enough to maintain channel morphology, sediment transport, habitat diversity and adequate gravels for salmonid spawning and rearing in the low-flow section and in the river downstream of Thermalito Afterbay	SP-G2; SP-W9			
GE5	Under existing conditions, are the moderate winter floods and bankfull flows adequately recruiting the amount of large woody debris needed to maintain adequate salmonid rearing habitat in the low-flow section and in the river downstream of Thermalito Afterbay	SP-G2; SP-W9; SP-F10			
GE6	How will the future demand for project water change the timing and duration of moderate winter floods and bankfull flows in the low-flow section and in the river downstream of Thermalito Afterbay	SP-E1.2; SP-G2			

Draft SD1 Appendix B Reference #	Geology, Soils and Geomorphic Processes Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
GE7	Are the present streamflows defined under the SWP Feather River Flow Constraints adequate for maintaining natural fluvial river functions in the low-flow section and in the river downstream of Thermalito Afterbay (i.e., diversity of habitats: pool to riffle ratios, pool depth, stream bank angle, stream bank stability, stream bank vegetative cover, bedload deposition pattern, and stream bank vegetation root depth versus stream bank height above bankfull height)	SP-G2; SP-F10; SP-W9			
GE8	Evaluate channel capacities and potential need for more storage/flood protection engineering and operations deflection into levees by gravel bars	SP-E4			
GE9	Channel morphology and changes from operation – armoring spawning habitat and lateral erosion of banks	SP-G2; SP-W9			
GE10	Has the project resulted in sediment starvation (e.g., reduced gravel recruitment) to the lower river, and if so, by how much	SP-G1; SP-G2; SP-W9			
GE11	Riffles for culturally significant activities (spearfishing rights) are rare and the area where riffles currently exist is protected	SP-G2; SP-C1			
GE12	River flows through low-flow sections (historically 1,600 cfs, now 600 cfs) have changed – what is the effect on channel morphology, physical processes and biological habitat.	SP-G2; SP-E1.2; SP-W9			
GE13	Do analysis and mitigation on a watershed basis			X	
GE14	Cooperate with local, State, and Federal agencies as well as private landowners in long-range watershed planning. Use an interdisciplinary approach.			X	Collaborative Work Group meetings provide forum for discussions related to interdisciplinary approach.

Draft SD1 Appendix B Reference #	Geology, Soils and Geomorphic Processes Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
GE15	Avoid water quality degradation by using Best Management Practices during land management activities, and reduce sedimentation and channel erosion by rehabilitating deteriorating watersheds	SP-W7			
GE16	Coordinate with counties, Cal-Trans, and the Union Pacific Railroad to eliminate the sidcasting of waste material along travel ways, except at designated locations	SP-W7			
GE17	Reduce sediment yields from watersheds in deteriorating conditions and those tributary to eroding channels or hazardous flood prone areas	SP-W7			
GE18	Re-vegetate disturbed areas within the floodplains to stabilize soil, benefit fish and wildlife, and restore the natural flood control qualities	SP-W7			
GE19	Gravel recruitment impacts of the dam – both up and down stream	SP-G1; SP-G2; SP-W9			
GE20	Indicators of hydrological alteration (IHA analysis)	SP-G1; SP-G2			
GE21	Effect of project on recruitment of ocean beach sands	SP-G1			
GE22	Effect of accumulated sediment on lake bathymetry of Lake Oroville	SP-G1			
GE23	Releases that reflect nature cycles benefit biological cycles – how have changes in seasonal release patterns affected fish, invertebrates, and their habitat	SP-F1; SP-F10			
GE24	Direct, indirect, and cumulative impacts of project facilities and operations on sediment movement and deposition, river geometry, and channel characteristics. This includes impacts on stream competence, capacity, bank stability and extend, duration, and repetition of high flow events	SP-G2; SP-W9			

Draft SD1 Appendix B Reference #	Geology, Soils and Geomorphic Processes Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
GE25	Natural geomorphological processes historically occurred within the Feather River watershed and are the result of geologic and hydrologic processes such as weathering, erosion, runoff patterns, material transport and deposition. Project features and operations have altered these natural geomorphic processes. Alteration of these geomorphic processes has affected the riverine habitat and species that depend on it. The FWS is concerned that project operations may have taken us beyond some critical thresholds for ecosystem sustainability. We are concerned that maintenance of a satisfactory abiotic template (e.g., substrate used for invertebrate production and fish spawning) is not occurring). The FWS wants assurance that new license conditions will allow for minimum thresholds of geomorphic processes to take place thus ensuring sufficient natural sediment movement and a satisfactory abiotic habitat template are in place	SP-G1; SP-G2; SP-W9			

ENVIRONMENTAL – FISHERIES

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE1	Are the project related Lake Oroville water level fluctuations presently affecting the reproduction and survival of warm-water sportfish;	SP-F3.1; SP-W1; SP-W6			
FE2	How will the project related Lake Oroville water level fluctuations affect the reproduction and survival of warm-water sportfish under future operational demands;	SP-F3.1; SP-W6			
FE3	Is the present minimum pool adequate for protecting the Lake Oroville cold-water sport fishery;	SP-F3.1; SP-W6			
FE4	Have biologists describe the extent of viral infection in Lake Oroville;	SP-F2			
FE5	Would a fish screen(s) on the pump-back operation prevent Infectious Hemopoatic Necrosis (IHN) and other diseases specific to Salmonid species from spreading and becoming permanently established in Lake Oroville? IHN, if permanently established in Lake Oroville would affect survival of hatchery and river spawned Salmonid species;	SP-F2; SP-F3.2			
FE6	Are additional funds needed for law enforcement? Presently 2/3's of all the local game warden activities are spent on the Oroville Wildlife Area. An augmentation of funding for more wardens would free up time for other law enforcement activities outside of the wildlife area;	SP-R5; SP-T6			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE7	Has DWR completed or met all its obligations for recreation mitigation (wildlife habitat and fishing) under the existing FERC license;				Compliance history is documented by FERC in 1994 Order.
FE8	Lake Oroville releases made for power generation may cause dramatic fluctuations in lake level. What are the potential impacts of fluctuation zone and surface elevation change on recreation opportunities and on fish and wildlife habitat?	SP-F1; SP-F3.1; SP-F3.2; SP-W3; SP-W6			
FE9	Use Instream Flow Incremental Methodology (IFIM) or a comparable methodology to determine streamflow needs to ensure that trout habitat quality and quantity are not reduced within project area and/or project affected areas;	SP-F3.2; SP-F16			
FE10	Provide for fish passage on any drainage or stream where spawning activity occurs;	SP-F15			
FE11	Inventory streams, streamside areas, and other wetlands in deteriorating condition and restore on a priority basis within project area and/or project affected areas	SP-W7			
FE12	Protect and improve wild trout habitat;	SP-F3.1			
FE13	Require proponents to coordinate with Plumas National Forest (PNF) in analysis of instream flow need for all potentially affected riparian dependent species;	SP-F3.1; SP-F16			
FE14	Provide for fish passage and maintain natural channel character at stream crossings within project area and/or project affected areas;	SP-F15			
FE15	Develop and maintain a balanced fishery;	SP-F3.2			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE16	Establish and locate area for bass tournaments on the lake and include stands, parking, water, electricity, vendors, boats, etc.;	SP-W3			
FE17	Shooting carp – investigate use at Lake Oroville for this activity;	SP-R17; SP-T9			
FE18	Develop and implement a long-term fisheries management plan;				Fisheries Management Plan will be part of application
FE19	Rearing bass (plants) for recreational and trophy fishery;	SP-R17; SP-T9			
FE20	Develop bank fishing sites, cutaways used as fish habitat;	SP-W3; SP-R17; SP-T9			
FE21	Remove or replace fish ladder at North Fork Feather River Big Bend Dam so that cold water fish (salmon and trout) are able to spawn in natural waters;	SP-F15			
FE22	Prevent Northern Pike from entering Lake Oroville by eliminating them from the licensee's upstream impoundments. If Northern Pike enter Lake Oroville and Feather River watershed, aggressively address the problem and successfully eliminate the fish;	SP-F21		X	
FE23	Hire a full-time independent biologist for Lake Oroville in addition to DWR biologist;	SP-F3.1			
FE24	Evaluate potential to restore Ruddy Creek;				
FE25	Interaction of lake fishery with tributaries fisheries;	SP-F5/7; SP-F2; SP-F3.1			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE26	Traditional fishing activities that were impacted by construction of dam;	SP-C1			
FE27	Land-locked salmon fishery;	SP-F5/7; SP-F10			
FE28	North Forebay – preservation of existing wildlife;	SP-T1; SP-T9			
FE29	Protection of upstream resources energy balance issues – historic uses salmon – steelhead moving upstream – biomass – nutrient dispersal;	SP-F8; SP-F15			
FE30	Trophy fishing in North Fork Feather River outside of project boundaries;				Outside FERC Project boundary
FE31	Several fish hatchery issues need resolution, such as the relationship between the hatchery and restoration of a natural ecosystem, straying and genetic impacts, harvest rates, and disease;	SP-F2; SP-F8; SP-F9			
FE32	Ongoing studies in the lower Feather River include adult and juvenile steelhead snorkel surveys and a habitat inventory, beach seine surveys to determine the temporal and spatial rearing extent of juvenile steelhead and salmon, rotary screw trap sampling of Chinook salmon to monitor the timing and number of emigrants, Chinook egg survival studies, particularly in the low-flow channel, Chinook spawning escapement surveys, redd de-watering and juvenile surveys in the Lower Reach, effects of water temperatures on juvenile steelhead rearing, steelhead creel surveys to gather adult steelhead life history data, and invertebrate research;	SP-F3.2; SP-F10			Ongoing studies

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE33	Are the present streamflows defined under the State Water Projects Feather River Flow Constraints being met and are they adequately protecting steelhead and fall, late-fall, and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay for migrating, holding, spawning, and rearing of steelhead and fall, late-fall, and spring-run Chinook salmon;	SP-W6; SP-F3.2; SP-F10			
FE34	Is additional Physical Habitat Simulations modeling (PHABSIM) necessary to determine what streamflows are necessary for spawning and rearing steelhead and fall, late-fall, and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay;	SP-F16			
FE35	Is riparian vegetative cover in the low-flow section and in the river downstream of Thermalito Afterbay adequate under present flow conditions for rearing steelhead and fall, late-fall, and spring-run Chinook salmon;	SP-F10; SP-F16			
FE36	Under existing conditions, does the diversity and abundance of benthic macroinvertebrates in the low-flow section and in the river downstream of Thermalito Afterbay suggest a healthy stream channel;	SP-F1; SP-F3.2; SP-W1			
FE37	Under existing conditions, are there adequate amounts of suitable gravel for salmonid spawning in the low-flow section and in the river downstream of Thermalito Afterbay;	SP-F10; SP-F16			
FE38	Preserve natural riparian flood control abilities. Remove only those log jams or major debris accumulations that have a high potential of causing channel damage, block fish passage, or could be transported downstream by high flows and cause loss of property;	SP-W9			
FE39	Insure that stream alterations restore the original flow capacity while preserving the existing channel alignment;	SP-W7			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE40	Comply with the Executive Orders 111988, Floodplain Management, and 11990, Protection of Wetlands;	SP-T3/5			
FE41	Early on and clearly identify flow rates and temperature requirements downstream of the dam;	SP-W6; SP-F10; SP-F16			
FE42	Work together with DFG to preserve and continue hunting and fishing opportunities in the after-bay and borrow areas;	SP-T9; SP-R9; SP-R5			
FE43	Consider changes in flow rates on recreational fishing;	SP-F3.2; SP-R3			
FE44	Increase emphasis on steelhead protection and habitat and less on salmon;	SP-F5/7; SP-F10; SP-F16			
FE45	Evaluate salmon numbers;	SP-F10			
FE46	Clearly identify species, landowners along river, flow rates and temperature requirements downstream of the dam;	SP-W6; SP-F10; SP-F16			
FE47	Desire to see a balanced fishery;	SP-F5/7			
FE48	Evaluate potential of fish diseases spread from Lake Oroville to Feather River and back as result of pump-back operation;	SP-F2			
FE49	Incidence of fish disease in response to temperature changes below dam;	SP-F2; SP-W6			
FE50	Barbless hooks for steelhead catch/release of females;	SP-T9; SP-F17			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE51	Impact of local actions on regional fisheries – impact area and what is contained within that area;	SP-F5/7; SP-F10			
FE52	Facility operations and impact – on bass fishery and spawning activities at afterbay (protect and enhance bass fishery);	SP-F3.1; SP-F5/7; SP-W6			
FE53	Are the present project related flow ramping/fluctuation restraints adequately protecting rearing Salmonid species from being stranded in the low-flow section and in the river downstream of Thermalito Afterbay;	SP-F10; SP-E1			
FE54	Are the present project related flow ramping/fluctuation restraints adequately protecting Salmonid redds and juveniles, conserving their habitat and forage, and spawning gravel from being scoured out from the low-flow section and from the river downstream of Thermalito Afterbay;	SP-W1; SP-F10; SP-G2; SP-E1			
FE55	What engineering or other reasonable and prudent solutions are available that would prevent the interbreeding of fall and spring-run Chinook salmon in the low-flow section of the Father River (migration barrier and/or flow and temperature changes in low-flow section);	SP-F10			
FE56	The Feather River's low-flow reach has historically provided spawning habitat for a cold-water fishery. How have reduced flows to this stream reach affected water temperature and gravel substrate necessary for successful salmonid reproduction?	SP-W6; SP-G2; SP-F10; SP-F16			
FE57	Provide habitat leading to viable populations of endangered species. Maintain habitat to support viable populations of all native and desired nonnative vertebrate species;	SP-F3.1; SP-F3.2; SP-T2			
FE58	Improve and protect habitat for designated emphasis and harvest species. Identify and evaluate potential conflicts among project effects and management actions for protected and sensitive species;	SP-F3.1; SP-F3.2			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE59	Protect and improve habitat for trout;	SP-F3.1			
FE60	Species recovery in upper and lower river;	SP-F3.1; SP-F3.2			
FE61	Maintain Feather River contribution of 20% of the commercial ocean salmon catch			X	
FE62	Re-introduction above dam of anadromous fish	SP-F8; SP-F10; SP-F15			
FE63	Coordination between re-licensing effort and existing management plans in and out of the project boundary	SP-L3			
FE64	Effect of project on available upstream fishery habitat (Incorporate all project facilities)	SP-F3.1; SP-F15; SP-W1			
FE65	Explore offsite mitigation opportunities				
FE66	Expand land-lock fishery to include all salmon not just Chinook	SP-F3.1; SP-F5/7; SP-F10			
FE67	All tributaries to project waters evaluated for spawning potential including upstream of Big Bend diversions	SP-F15			
FE68	Assurances of how things will be done, guarantee credible data, and sustainability of solutions (adaptive management).			X	
FE69	Page 8 Bullet 8 – split into two issues			X	
FE70	Potential to reopen salmon fishery above Highway 70 bridge	SP-F3.1			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE71	Species recovery in reservoir and river	SP-F3.1; SP-F3.2			
FE72	ESA compliance, want to hear about conflicts with folks and other species (bald eagles);	SP-T2			
FE73	Responsible management by resource agencies;	SP-T6; SP-R4; SP-R5			
FE74	What are the cumulative project impacts on passage of anadromous and riverine fish;				
FE75	Project structures or operations that either have in the past, or continue to introduce predators, create suitable habitat for predators, harbor predators, or are conducive to the predation of salmonids;	SP-F3.2; SP-F21			
FE76	Prevent the introduction of new piscivorous (fish-eating) predators (e.g., northern pike, striped bass, white bass, etc.) introductions to project waters;	SP-F21		X	

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE77	Predation of fish species naturally occurs under all conditions. However, project conditions could exacerbate the occurrence of predation on certain species. Changes in license conditions could lead to unnecessary increase in predation on desirable gamefish or threatened and endangered species, or other species of concern. Occurrence (habitat, distribution and numbers of predator fish should be identified in all riverine waterways affected by project releases. Predation investigations should be comprehensive and predator management be available as a fishery management tool.	SP-T2; SP-F21			
FE78	Quality and extent of habitat above currently impassable barriers to migration;	SP-F15			
FE79	Oroville Reservoir provides substantial recreational fishing opportunity for both black bass and Chinook salmon fisheries. Hatchery planting practices for Chinook salmon could be impacting habitat conditions and the population dynamics of black bass and other species, thus impairing socioeconomic use. Fishing interests want to improve the reservoir fishery so that it becomes a more popular recreational destination as a result of a successful balanced species reservoir fishery. An appropriate balance of species should exist in the reservoir to support environmental sustainability and long-term maintenance of a healthy ecosystem;	SP-W3; SP-F5/7; SP-F9			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE80	Big Bend Dam is located on the North Fork Feather near the maximum elevation of Lake Oroville. The dam has been partially breached, but appears to act as an impediment to up- and downstream migration of fish and aquatic dependent species during portions of the year. There is an interest in determining the impact of Big Bend Dam on migration of fish and aquatic dependent species from Lake Oroville to the North Fork Feather River and back;	SP-F15			
FE81	Currently some of the species of fish commonly found in Lake Oroville are also found in the Poe reach of the North Fork Feather River. Maximum water temperatures in the Poe reach often exceed 20 C (68 F), making management of the Poe reach as a coldwater fishery difficult. There is an interest in determining the interaction of the Lake Oroville fishery with the Poe reach fishery, and identifying measures that can be taken to maintain the Poe reach as a coldwater fishery;	SP-F3.1; SP-F5/7; SP-W6			
FE82	Prior to construction of Oroville Dam anadromous fish had access to the POE reach of the North Fork Feather River. These fish provided a source of energy to the river ecosystem. Construction of the dam severed that connection. There is an interest in determining the contribution of anadromous fish as an energy source for aquatic dependent species located in the North Fork Feather River and devising a strategy for replacing this loss.	SP-F8; SP-F10; SP-F15; SP-F2			
FE83	Macroinvertebrates as an indicator of water quality;	SP-F1; SP-F3.1; SP-W1			
FE84	Evaluate indicators of hydrological alteration (IHA analysis);	SP-F3.1; SP-F3.2			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE85	Impact of project facilities and operations on fish passage includes structures, flows, and/or water quality conditions that impede or block passage within and from current and/or historic habitat and operations that impact passage or have the potential to enhance passage. Passage includes movement of spawning or holding adults, emigrating smolts, or movement of juveniles to different habitat areas for purposes of feeding, avoiding predators, or sheltering;	SP-F15; SP-W6			
FE86	Adequacy of current ramping rate to protect anadromous salmonids and conserve their habitats and forage. This includes providing a range of schedule of flows necessary to optimize habitat, stable flows during spawning and incubation of in gravel forms, flows necessary to ensure redd replacement in viable areas, and flows necessary for channel forming processes, riparian habitat protection and maintenance of forage communities. This also includes impacts of flood control or other project structures or operations that act to displace individuals or their forage or destabilizes, scours, or degrades habitat;	SP-F1; SP-F3.2; SP-F10; SP-F16; SP-W1			
FE87	Introgression occurring between various runs of Chinook salmon and between hatchery and wild salmon and steelhead. This includes direct, indirect and cumulative impacts from hatchery practices, project facilities and operations, lack of adequate spawning habitat and impassable migration barriers that exclude access to historic spawning habitats;	SP-F9			
FE88	Impact of hatchery facilities and/or operations on anadromous salmonids. This includes the direct, indirect and cumulative impacts of hatchery product on anadromous salmonids and the direct, indirect and cumulative impacts of hatchery facilities and operations on salmonids and their habitats;	SP-F10; SP-F2; SP-F9; SP-W6			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE89	Impact of project structures and operations on water quality conditions necessary to sustain anadromous salmonids and their habitats;	SP-F1; SP-F10; SP-W1; SP-W6			
FE90	Adequacy of current project operating regimes and structures to optimize water quality conditions for anadromous salmonids and their habitats;	SP-F1; SP-F10; SP-W1; SP-W6			
FE91	Current condition of habitat potentially impacted by project and alternatives to conserve or enhance anadromous salmonids;	SP-F1; SP-F10; SP-F15; SP-F16			
FE92	Priority of salmonid habitat conservation in current operating criteria and various operating agreements;	SP-F10			
FE93	Introgression occurring between fall-run and spring-run Chinook populations in the Feather River due to hatchery practices and impassable migration barriers;	SP-F9; SP-F10; SP-F15			
FE94	Evaluate the potential impacts of striped bass predation mortality on juvenile Chinook salmon and steelhead within the lower Feather River and the effects of project operations on predator-prey interactions, and identify and evaluate alternative methods for controlling and reducing predation mortality by species such as striped bass on juvenile rearing and emigrating salmonids;	SP-F21			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE95	The lower Feather River provides habitat to support a variety of anadromous fish species including Chinook salmon, steelhead, striped bass, American shad and sturgeon. Potential changes in license conditions could adversely impact habitat supporting these species. Habitat investigations should evaluate the existing quality and quantity of habitat and determine alternative improvements for the various life history needs of anadromous species including flow, water temperature, instream and riparian cover, substrate and spatial area;	SP-F1; SP-F3.2; SP-F10; SP-F9; SP-F16; SP-W1; SP-W6			
FE96	The lower Feather River provides habitat to support a variety of resident native and resident introduced species including coldwater species such as rainbow, brook, and brown trout, and warm water species such as bass, catfish, bluegill, green sunfish, carp and others. Potential changes in license conditions could adversely impact habitat supporting these species or upset habitat conditions such that less desirable species are favored. Habitat investigations should evaluate the existing quality and quantity of habitat and determine alternative improvements for the various life history needs of these resident native and non-native species including flow, water temperature, instream and riparian cover, substrate and spatial area;	SP-F1; SP-F3.2; SP-F9; SP-W1; SP-W6			
FE97	The habitat for fishes in the lower Feather River is affected by the flow releases from the project. Seasonal timing, volume, and rate of release all have an affect on fish habitat conditions. Potential changes in license conditions for flow releases could adversely affect habitat conditions for one or more fish species. Fishery investigations should examine the adequacy of flows for maintaining all life history needs for anadromous and resident species. There should be evaluation of potential for flow improvements in the low-flow section. Fishery investigations should be sufficient to determine how best to meet the combined needs of the various anadromous and resident fish species;	SP-F1; SP-F3.2; SP-F10; SP-F16; SP-W1			

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE98	Fish passage is an essential survival element for anadromous species and obstructed passage can also have serious adverse impact on resident species biodiversity and populations. Both upstream and downstream-unobstructed fish passage below the project should occur. Fishery investigations should examine the adequacy of passage for all species in the reaches of the lower Feather River downstream of the project. Evaluations should cover a sufficient range of flows and include examination of instream pits or gravel ponds;	SP-F10; SP-F15			
FE99	The Feather River Hatchery was constructed to mitigate for losses of upstream habitat when the Oroville facilities were constructed. There is a body of evidence suggesting that improperly planned hatchery practices can adversely impact native and non-native species including anadromous species. The effects of hatchery practices on naturally reproducing/self-sustaining anadromous populations should be examined as part of the fishery investigations. These evaluations should examine alternative practices that would lead to increased naturally reproducing/self-sustaining anadromous populations. Improper hatchery practices can also lead to transmission of serious fish diseases, and impact overall susceptibility of naturally reproducing populations to diseases.	SP-F2; SP-F9; SP-F10; SP-W6			
FE100	Create more habitat for the black bass and warm water fishes such as spawning beds or boxes; spawning plates or stationary buoy cables.	SP-F5/7			
FE101	Evaluate direct, indirect, and cumulative effects on Feather River spring-run chinook salmon (all life stages) resulting from daily water temperature caused by project operations in the Feather River below the Fish Barrier Dam, between Hwy 70 and the Afterbay outlet, and below the outlet.	SP-W6; SP-F3.2; SP-F10			Comment 06-12 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE102	Evaluate direct effects on Feather River spring-run chinook salmon (all life stages) resulting from daily water temperature caused by project operations in the Hatchery.	SP-F10; SP-F2; SP-F9; SP-W6			Comment 06-13 from Draft SD1, Appendix C
FE103	Determine the daily water temperature requirements to keep Feather River spring-run chinook salmon in good conditions at all times at the Hatchery.	SP-F10; SP-F2; SP-F9; SP-W6			Comment 06-14 from Draft SD1, Appendix C
FE104	Evaluate reintroduction of the original gene pool of the Feather River fall-run steelhead trout below the Fish Barrier Dam	SP-F9			Comment 06-15 from Draft SD1, Appendix C
FE105	Determine the daily water temperature requirements to keep steelhead trout in good conditions at all times in the Feather River below the Fish Barrier Dam, between Hwy 70 and the Afterbay outlet, and below the outlet.	SP-W6; SP-F3.2; SP-F10			Comment 06-16 from Draft SD1, Appendix C
FE106	Determine the daily water temperature requirements to keep steelhead trout in good conditions at all times in the Feather River Hatchery.	SP-F10; SP-F2; SP-F9; SP-W6			Comment 06-17 from Draft SD1, Appendix C
FE107	Determine the daily water temperature requirements to keep fall-run chinook salmon in good conditions at all times in the Feather River below the Fish Barrier Dam, between Hwy 70 and the Afterbay outlet, and below the outlet.	SP-W6; SP-F3.2; SP-F10			Comment 06-19 from Draft SD1, Appendix C
FE108	Determine effects on fall-run chinook salmon due to daily water temperature changes resulting from operations and the Hatchery.	SP-F10; SP-F2; SP-F9; SP-W6			Comment 06-20 from Draft SD1, Appendix C
FE109	Evaluate the salmon and steelhead planting from the Feather River in other streams throughout the State.	SP-F9			Comment 06-23 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Fisheries Issues Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
FE110	Evaluate the existing daily riverflow requirements for spring-run and fall-run chinook salmon species (all life stages) and steelhead trout (all life stages) in the Feather River below the Fish Barrier Dam to the Afterbay Outlet, and downstream	SP-F1; SP-F3.2; SP-F10; SP-F9; SP-F16; SP-W1; SP-W6			Comment 06-25 from Draft SD1, Appendix C
FE111	Evaluate the new mandatory minimum river flow requirements for spring-run and fall-run chinook salmon species (all life stages) and steelhead trout (all life stages) in the Feather River below the Fish Barrier Dam to the Afterbay Outlet and downstream	SP-W6; SP-F3.2; SP-F10			Comment 06-26 from Draft SD1, Appendix C
FE112	Consider the removal of the Big Bend Dam or construction and maintenance of a "state of the art" fish ladder.	SP-F15			Comment 06-28 from Draft SD1, Appendix C
FE113	Consider purchase and re-operation of the Miocene Project for environmental benefit	SP-F15			Comment 06-29 from Draft SD1, Appendix C
FE114	Consider the construction and operation of a rainbow trout hatchery for Lake Oroville	SP-F1; SP-F3.2; SP-F9; SP-W1; SP-W6			Comment 06-30 from Draft SD1, Appendix C
FE115	Consider screening the powerhouse intakes to prevent entrainment	SP-F15			Comment 06-31 from Draft SD1, Appendix C

RECREATION AND SOCIOECONOMICS

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE1	Existing recreational facilities are not adequate to meet demand	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE2	Upgrade all facilities and develop more areas for recreation	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE3	Look at future and reliable funding sources for recreational development	SP-R5; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE4	There is an interest in integrating recreation opportunities provided by the reservoir with those that could occur on adjacent national forest system lands. Uses need to be complimentary with no unmitigated impact on heritage resources and little if any impact on aquatic and terrestrial wildlife habitat or vegetative productivity. Opportunities could include boat in camping sites, trails from the reservoir to points of scenic or other interest and improvement of existing road access to the reservoir. (Plumas National Forest)	SP-R5; SP-R17;			Coordinate with Environmental Work Group
RE5	Improve Loafer Creek facilities	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE6	Finish Feather River Enhancement Project				Interim project with Interim Settlement Agreement negotiated.

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE7	Increase camping facilities	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE8	At Lime Saddle Memorial Park, build it out and extend it to capacity to which it was originally designed. Up to 250 campsites and boat ramp, swimming beach.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE9	Develop campground at the Afterbay	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE10	Develop smaller, primitive style campgrounds (tent) particularly around Enterprise boat ramp	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE11	Encourage use of the Forebay RV parking facilities	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE12	Convert floating campsites for winter use	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			Winterize floating campsites is an Interim Recreation Project.

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE13	Berry Creek Road needs improvement and campground facilities are needed at lakeside.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE14	Increase parking facilities	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE15	Provide more parking at Bidwell Canyon	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R16; SP-R17;			
RE16	Open spillway road to Potters Ravine for recreation development.	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE17	Widen Hwy 162 to Miners Ranch Road	SP-R14		X	
RE18	Develop monorail system to Butte County			X	
RE19	Upgrade roads to facilities	SP-R1; SP-R14;			Upgraded roads to some facilities is a Category III Interim Recreation Project.

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE20	Improve access from the north	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;		X	
RE21	Develop an alternative route to and from Lake Oroville area. From east to west, Miners Ranch Road, converging with Foothill Boulevard, and out Ophir Road to Hwy 70.	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;		X	

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE22	Widen Hwy 162 as originally planned and encourage all levels of government to widen Hwy 70 to Oroville.	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;		X	
RE23	Build bridge from Nelson Ave Sports Complex to North Forebay and supply gas to site.	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE24	If there is going to be paving, consider Burma Road (more cost effective with no conflict of use)	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE25	Immediate access by public vehicles at Lakeland Boulevard to the old railroad grade area of the diversion pool with future consideration of improvements in that same area.	SP-R1			Vehicle access at Lakeland Boulevard is an Interim Recreation Project
RE26	Increase marinas	SP-R1; SP-R6; SP-R7; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE27	Establish and locate area for bass tournaments on the lake and include stands, parking, water, electricity, vendors, boats, etc.	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE28	Develop facilities (including grandstands, toilets, and campgrounds) at the Forebay/Afterbay to support competitive powerboat events	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE29	Include a marina and launching of boats along with many recreational activities at the Afterbay, with the entrance to the facilities off Hwy 99	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE30	Improve or extend roads at Vinton Gulch and Nelson Bar Road (both east and west) to the 800-foot level and increase parking and turn around for car-top launch only. At Nelson Bar east, create a parking area for local residents and install a walking path on the island to the 800-foot level. (LOFEC)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE31	Re-establish a boat launch for river usage by powerboats and canoes with an improved launch ramp on the west side of the River in the Wildlife area. (LOFEC)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE32	Re-establish and open the road to and from the Cherokee Road area to the Bloomer boat-in area and improve the access parking area at Dark Canyon. (LOFEC)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE33	Improve Ponderosa Way Trail to the Las Plumas Power House and consider adding camping and launch ramp to the east side of the North Fork Feather River. (LOFEC)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE34	Develop a management structure and funding for aquatic center programs at the north Forebay to bring boating safety and handling to the public	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			Boating safety training is an Interim Recreation Project

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE35	Expand use of facilities for boating education and water boat training (like Butte Sailing Club offers)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			Boating safety training is an Interim Recreation Project
RE36	Tournament water skiing location	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			Tournament Water Ski Site is an Interim Recreation Project

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE37	Open forks of lake for boating activity by changing regulations and gating the log booms for access	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE38	Loss of whitewater recreation opportunities and potential mitigation for loss (whitewater park)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE39	Provide houseboat anchor sites	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE40	Numerous proposals are being made within the Recreational and Socioeconomic Work Group to substantially increase the use of the Afterbay for boating, camping, and other activities. It is important that the environmental impacts of each of these proposals be carefully assessed so that waterfowl and other wildlife on the Afterbay are not adversely affected. (California Waterfowl Association)				Coordinate with Environmental Work Group
RE41	Investigate potential for shooting carp activity at Oroville	SP-R8; SP-R11 SP-R15;			Coordinate with Environmental Work Group
RE42	Long-term cold and warm water fisheries management plan	SP-F3.1; SP-F3.2			
RE43	Clean out the silt of all ponds and remove excess brush around ponds with clear paths to each and plant some warm water fish to each. One Mile Pond, plant with rainbows and brook trout and increase camping sites. (LOFEC)	SP-F3.2			
RE44	Consider changes in flow rates on recreational fishing	SP-R3; SP-F3.1; SP-F3.2			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE45	More emphasis on steelhead and less on salmon	SP-F10			
RE46	Encourage continuation of bass rearing program (as plants)	SP-F3.1			
RE47	Establish new lake records for fishing and establish a record keeper (group or business) (LOFEC)				
RE48	Establish bank-fishing sites along sloping banks around all campground areas – Parrish Cove, Foreman Creek, Bloomer Boat-in, Goat Ranch Boat-in, Loafer Creek. (LOFEC)	SP-R4; SP-R17			
RE49	Re-survey rivers and Oroville Lake for depth and mark dangerous areas with buoys. Publish new depth charts and make available to the public. (LOFEC)	SP-R2; SP-R17			
RE50	Lake Oroville releases made for power generation may cause dramatic fluctuations in the lake level. What are the potential impacts of fluctuation zone and surface elevation change on recreation opportunities and on fish and wildlife habitat? (SWRCB)	SP-R3; SP-R17; SP-F3.1; SP-T1			
RE51	Lake levels drop too low in the summer for boaters	SP-R3; SP-R17			
RE52	Has DWR completed or met all its obligations for recreation mitigation (wildlife habitat and fishing) under the existing FERC license? (CDFG)				Compliance history is documented by FERC in 1994 Order.
RE53	Create swimming facility (year-round) at Loafer Creek Recreation Area or other appropriate place to replace swimming lost when Bidwell Bar was inundated.	SP-R5; SP-R8; SP-R11 SP-R13; SP-R15; SP-R17;			Height Adjustable Swim Dock is an Interim Recreation Project
RE54	Water temperature below dam is too cold for swimming	SP-W6			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE55	North Forebay development and visibility of swimming opportunities – sand beach surround	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE56	Site improvements to existing flying site for model airplanes	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			Model Airplane Site Improvement is an Interim Recreation Project.
RE57	Improve the Off Hwy Vehicle Recreation Area (SVRA) at the Oroville complex. This would include and not be limited to 4x4 areas for training, safety, but also moto-cross type tracks also.		X		Outside FERC boundary
RE58	Larkin Road Shooting Range owned and maintained by the state off Larkin Road south of the Oroville Airport. Enhance parking area, accessibility and drainage.			X	Outside FERC boundary. Shooting Range is an Interim Recreation Project.

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE59	Open the Feather River to gold dredging from Hwy 70 bridge to and through the Wildlife area. Limit to 4" dredge, high banking, sluicing, and panning allowed and establish a building for concession and educational displays. Open from Memorial Day to Labor Day – establish a gold marketer to buy and sell gold and related items to gold recovery in the Feather River. Attraction would be closed during salmon and steelhead runs. (LOFEC)			X	Environmental constraints (ESA) will likely preclude this action.
RE60	Build an information center at the main entrance off Larkin Road for the Wildlife Area. (LOFEC)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE61	Create a mining display visible from Hwy (dredge equipment, etc.)	SP-R5; SP-R8; SP-R11; SP-R13; SP-R15; SP-R17;			
RE62	Consider acquiring the Campbell Hills property to continue existing uses such as hang-gliding, kite flying, paragliding, radio-controlled plane flying at area bordering Thermalito Forebay Recreation Area.			X	Outside FERC boundary.
RE63	What is the recreational value of hunting and fishing on project lands and how can they be enhanced? (DPR)	SP-R3; SP-R4; SP-R5; SP-R17; SP-R18			
RE64	Increase hiking trails	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE65	Build pedestrian bridge adjacent to Hwy. 70 bridge. (Possibly in conjunction with train bridge – multipurpose)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;		X	Outside FERC boundary
RE66	Develop more bike trails that are separate from hiking and equestrian trails	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE67	Build a trail starting at the Feather River Hatchery and continuing down river to access the proposed Hwy 70-bike/pedestrian crossing. Create picnic and river access areas on this stretch of the Feather River.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE68	Feather River trails – as proposed by the Bike Pathway Project, links of this access will be created under the Upper Thermalito Bridge and between the Diversion Dam and the old Feather River Railroad.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE69	Create comprehensive, integrated trail links around the Project.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE70	Move the security fence off the trail access at the Feather River Hatchery.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE71	Finish building the CA riding and hiking trail from Oroville Trail to Pacific Crest Trail.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;		X	Outside the FERC boundary. Studies indicated will provide some information.
RE72	Develop an endurance trail around the lake perhaps connecting to Pacific Crest Trail and preserve existing hiking and equestrian trail (in particular, preserve the Dan Beebe Trail as a historical equestrian and hiking trail)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE73	Open diversion dam as trail linkage. Create trail linkage from diversion dam to old railroad grade at the railroad trestle. Open west side of the river from the fish barrier dam to Burma Road as recreation area. Move fence back from riverbank at fish hatchery and develop trail from Table Mountain Bridge past the Hwy 70 bridge on north side of river.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE74	Provide overnight equestrian parking and camping facilities at existing facilities. Improve Lakeland Equestrian Parking Area as follows: expand parking area portable toilets, picnic tables, metal hitching posts, potable water, native trees planted for shade. Consider providing facilities for overnight camping, and maintain all areas as pavement free.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			Loafer Creek Equestrian Camp Improvements and group staging area are Interim Recreation Projects.

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE75	Install directional/rule signs for trails at parking areas and along trails, provide ranger enforcement of the rules.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE76	Provide multi-use trails	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE77	Evaluate unpaved status of RR grade multi-use trail	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE78	Improve Saddle Dam Equestrian Parking area by adding watering trough, picnic tables, metal hitching posts and planting native trees for shade on the perimeter, expand parking area for major events. Maintain all areas as pavement free. This should apply to the Visitor Center Staging Area as well	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			Saddle Dam Improvements and Group Staging Areas are Interim Recreation Projects.

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE79	Replace water trough that was removed from below the OWID ditch to a location nearby, as well as obtaining equestrian input as to watering locations on all present and future trails.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE80	Add picnic tables and hitching posts at Long Bar Pond, Glen Pond Meadows, and in an open area near the OWID ditch east of the Oroville Dam Highway crossing as well as at all staging areas.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE81	Add picnic tables and benches across from and at the Oroville Dam Spillway along the railroad grade and old construction road, multi-use sections of trail.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE82	Evaluate potential for equestrian amphitheater/rodeo arena/multi-use/boarding facility at Larkin area, Thompson's Flat or a suitable alternative site with accessibility to existing Oroville equestrian trails	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE83	Temporarily rough clear/grade some sections of the trail used for the annual LOVER equestrian event, including an alternate route, parallel to the bike route, up the south side of the dam for horses to use during LOVER ride.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE84	Continue Lakeshore habitat improvement.	SP-R8; SP-R11 SP-R15; SP-T1			Coordinate with Environmental Work Group
RE85	Upgrade portable restrooms to permanent ones at various locations	SP-R5; SP-R8; SP-R11 SP-R15; SP-R17			Restroom Upgrades is Interim Recreation Project.

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE86	Water lines at the day use area along the river between the Fish Barrier Dam and the Diversion Dam need to be installed to irrigate plantings. Restrooms and day use area improvements are also needed. Clean up old 'City' park adjacent to the Fish Barrier Dam, just north of the Fish Hatchery. Provide picnic areas and restroom facilities.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Fish Hatchery Landscaping is an Interim Recreation Project.
RE87	Need to establish a debris collection program on regular schedule	SP-R11; SP-L2			Coordinate with Land Use Work Group
RE88	Remove old Rail Road trestle and other debris from river.	SP-R11; SP-R17; SP-L4			Coordinate with Land Use; Environmental issues
RE89	Clean up shoreline, particularly adjacent to camping and public access areas. Use county prisoner-release programs if necessary, to maintain clean shorelines.	SP-R11; SP-L4			
RE89	Remove concrete and construction debris in Feather River including below the Fish Barrier dam, below the Table Mountain Bridge, below the Hwy 70 bridge.	SP-R11; SP-L4			Coordinate with Land Use; Environmental issues
RE90	Dump areas used by DWR need to be removed.	SP-R11; SP-L4			
RE91	Evaluate fuel loading in areas within the Project area, including land along the Feather River below Oroville Dam through the Long Bar area and land near the Diversion Dam.	SP-R11; SP-L5; SP-T11			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE92	Install warning system for water releases.	SP-R2; SP-R17;			Warning System for Water Releases is an Interim Recreation Project.
RE93	Provide an emergency boat for CDF	SP-R2; SP-R17;			
RE94	Evaluate existing lake security and need for increased personnel	SP-R2; SP-R4; SP-R5; SP-L2			
RE95	Create, enhance and preserve Craig Access Park	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE96	Restore and improve recreation resource along the river corridor from the dam, downstream to the wildlife area	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			Also Comment 05-99 from Draft SD1, Appendix C
RE97	Camouflage the power line towers	SP-L4			
RE98	Various recreational and public use facilities were designated as mitigation measures to minimize impacts resulting from the original Oroville Project construction. The Licensee should provide a complete inventory of recreational mitigation obligations required by Articles of the existing FERC License, and should clearly disclose the current status of compliance with those measures. (SWRCB)				Compliance history relative to recreation is summarized in FERC 1994 Order.
RE99	There is an interest in reviewing the arrangement to defer recreation management to the California Department of parks and Recreation for the purpose of determining whether to continue, modify or terminate this agreement. The arrangement if continued needs to be formally documented and updated to reflect current management direction. (Plumas National Forest)	SP-R5			
RE100	Replace landscaping at the Feather River Fish Hatchery and adjacent river areas.				Fish hatchery Landscaping is an Interim Recreation Project
RE101	Create work team to remove invasive, non-native plants (List A and B) from State Water Project and DWR areas.	SP-T7			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes																										
RE102	Re-seed face of Oroville Dam and perimeter of reservoir exposed during drawdown.				Re-seed Oroville Dam is an Interim Recreation Project																										
<p>Issue Numbers RE103 – RE114 (below) have slightly changed from the former numbers in the Draft SD-1, Appendix B. The Draft SD1 list contained three identical comment duplicates, which have since been removed. The removed Issue Numbers include RE103, RE104, and RE110, which duplicated RE 27, FE20, and RE98, respectively. As a result the Issue Numbers RE103 – RE114, from the Draft SD1 have changed as follows:</p> <table><tr><th><u>Draft SD1</u></th><th><u>Current (below)</u></th></tr><tr><td>RE105</td><td>RE103</td></tr><tr><td>RE106</td><td>RE104</td></tr><tr><td>RE107</td><td>RE105</td></tr><tr><td>RE108</td><td>RE106</td></tr><tr><td>RE109</td><td>RE107</td></tr><tr><td>RE111</td><td>RE108</td></tr><tr><td>RE112</td><td>RE109</td></tr><tr><td>RE113</td><td>RE110</td></tr><tr><td>RE114</td><td>RE111</td></tr><tr><td>RE115</td><td>RE112</td></tr><tr><td>RE116</td><td>RE113</td></tr><tr><td>RE117</td><td>RE114</td></tr></table>						<u>Draft SD1</u>	<u>Current (below)</u>	RE105	RE103	RE106	RE104	RE107	RE105	RE108	RE106	RE109	RE107	RE111	RE108	RE112	RE109	RE113	RE110	RE114	RE111	RE115	RE112	RE116	RE113	RE117	RE114
<u>Draft SD1</u>	<u>Current (below)</u>																														
RE105	RE103																														
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RE114	RE111																														
RE115	RE112																														
RE116	RE113																														
RE117	RE114																														
RE103	Traditional fishing activities that were impacted by construction of dam	SP-C1																													

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE104	Trophy fishing in North Fork Feather River.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE105	Work together with DFG to preserve and continue hunting and fishing opportunities in the after-bay and borrow areas	SP-R1; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			
RE106	Consider changes in flow rates on recreational fishing	SP-R7; SP-F3.1; SP-F3.2			
RE107	Efficiently manage recreation in the Lake Oroville State Recreation Area	SP-R4; SP-R17;			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE108	Manage the Wild and Scenic Zones of the Middle Fork of the Feather River consistent with the Wild and Scenic Rivers Act			X	Outside the FERC Project boundary. Boundary for Wild and Scenic is set at elevation so any changes in project operations could affect designation.
RE109	Continue cooperation allowing the California Department of Parks and Recreation to manage the reservoir area including Plumas National Forest lands	SP-R3; SP-R4; SP-R17;			
RE110	Manage the Feather Falls Scenic Area as a Semi Primitive Non Motorized area			X	Outside the FERC Project boundary
RE111	Manage flows and/or reservoir storage to maintain or enhance riparian plant communities and habitat for all life stages of fish. Cooperate with local, State, and other Federal water management agencies. Protect riparian areas while providing developed facilities	SP-T3/5; SP-T1			
RE112	Elaborate on the management of the feather falls scenic area			X	Outside FERC Project boundary
RE113	Look at what happens to money developed from power generation and potential to put into community. Have an economist evaluate the implications of promises versus delivery. Look at history to understand the perspectives of the community over the last 30 years.			X	
RE114	Develop way to bring power and water directly from the project to the City of Oroville to stimulate economic development.			X	DWR has investigated this issue in conjunction with Butte County Tax Payers Association, and determined that it is not practical due to feasibility, cost, and regulatory constraints.

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE115	Establish a tour boat operation on the lake	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Comment 01-01 from Draft SD1, Appendix C
RE116	Add key programs/facilities to enhance use of Loafer Creek Area, i.e., concession facilities and a swimming/water play feature related to the day use and camping areas	SP-R9; SP-R13; SP-R17; SP-R18; SP-R19;			Comment 01-02 and 05-30 from Draft SD1, Appendix C
RE117	Re-design Bidwell Creek area to provide for optimum public use. i.e. relocate some camping spaces to provide for more boat trailer parking	SP-R7; SP-R9; SP-R13			Comment 01-03 and 05-31 from Draft SD1, Appendix C
RE118	Improve access to Lime Saddle Marina and launch ramp at lower lake elevations	SP-R7; SP-R9; SP-R13			Comment 01-04 and 05-32 from Draft SD1, Appendix C
RE119	Establish a long-term concession lease at Lime Saddle with improved services	SP-R7; SP-R9; SP-R13			Comment 01-05 and 05-33 from Draft SD1, Appendix C
RE120	Add additional visitor services at Lime Saddle, i.e. restaurant, lodge, store, visitor center	SP-R7; SP-R9; SP-R13			Comment 01-06 and 05-34 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE121	Add additional parking spaces at Lime Saddle.	SP-R7; SP-R9; SP-R13			Comment 01-07 and 05-35 from Draft SD1, Appendix C
RE122	Acquire PG&E property at Lime Saddle entrance	SP-R7; SP-R9; SP-R13			Comment 01-08 and 05-36 from Draft SD1, Appendix C
RE123	Re-locate concessionaire maintenance area at Lime Saddle	SP-R7; SP-R9; SP-R13;			Comment 01-09 and 05-37 from Draft SD1, Appendix C
RE124	Add a swimming/water play feature accessible to the campground and day use area at Lime Saddle.	SP-R7; SP-R9; SP-R13;			Comment 01-10 and 05-38 from Draft SD1, Appendix C
RE125	Add a special event venue for cultural events at Lime Saddle.	SP-R7; SP-R9; SP-R13;			Comment 01-11 and 05-39 from Draft SD1, Appendix C
RE126	Develop new boat launching and marina facilities in accordance with future demand, i.e., Foreman Creek and Potter's Ravine.	SP-R7; SP-R9; SP-R13			Comment 01-12 and 05-40 from Draft SD1, Appendix C
RE127	Take advantage of existing infrastructure at recreation area to make improvements to developed areas that will extend the use season and increase attendance during the peak season when the lake is drawn down, i.e. bass tournament staging area.	SP-R7; SP-R9; SP-R13			Comment 01-13 and 05-41 from Draft SD1, Appendix C
RE128	Clean up the Diversion Pool Canyon and remove exotic plants.	SP-R7; SP-R9; SP-R13; SP-T7			Comment 01-14 and 05-55 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE129	Make Diversion Pool Trail improvements that meet the needs of hikers, equestrians, and bicyclists and that provide connection to a regional trail network as set forth in a comprehensive trails plan element to the recreation plan.	SP-R7; SP-R9; SP-R13			Comment 01-15 from Draft SD1, Appendix C
RE130	Consider the Diversion Pool Canyon for additional uses, i.e. equestrian special events center, picnicking, nature observation, fishing, trail use and low impact lodging (camping, B&B's)	SP-R7; SP-R9; SP-R13			Comment 01-16 from Draft SD1, Appendix C
RE131	Establish boat-in and/or hike-in camping areas in the Diversion Pool Canyon.	SP-R7			Comment 01-17 from Draft SD1, Appendix C
RE132	Extension of nature programs from existing nature center	SP-R7; SP-R9; SP-R13			Comment 01-18 from Draft SD1, Appendix C
RE133	Recreation related economic development at the Forebay, i.e. golf course/conference center, lodging, restaurants, special event venue for powerboats, dry boat storage, etc.	SP-R7; SP-R9; SP-R13; SP-R18; SP-R19			Comment 01-19 from Draft SD1, Appendix C
RE134	Provide additional day use recreation opportunities at the Forebay for local residents of Oroville and Gridley, i.e. shore side walkways/trails, grass, picnic areas, sandy beaches, boating access, etc.	SP-R7; SP-R9; SP-R13;			Comment 01-20 and 05-76 from Draft SD1, Appendix C
RE135	Consider Afterbay as an alternative site for an equestrian center	SP-R7; SP-R9; SP-R13;			Comment 01-21 and 05-77 from Draft SD1, Appendix C
RE136	Consider Afterbay Aquatic Center potential site	SP-R7; SP-R9; SP-R13; SP-R18; SP-R19			Comment 01-22 and 05-78 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE137	Provide additional day use and camping at South East Afterbay complex	SP-R7; SP-R9; SP-R13; SP-R13;			Comment 01-23 and 05-79 from Draft SD1, Appendix C
RE138	Consider boat-in camping on islands in Forebay	SP-R7; SP-R9; SP-R13;			Comment 01-24 and 05-80 from Draft SD1, Appendix C
RE139	Improve or relocate water-ski area to pond in the Wildlife area.	SP-R7; SP-R9; SP-R13;			Comment 01-25 from Draft SD1, Appendix C Tournament Water Ski Site is Interim Recreation Project
RE140	Trail link needed along Hwy 70	SP-R7; SP-R9; SP-R13;			Comment 01-26 and 05-89 from Draft SD1, Appendix C
RE141	Locate Regional Visitor Center at Riverbend Park (Montgomery and Hwy 70) as a gateway to Old Oroville and the Lake Oroville Recreation area	SP-R7; SP-R9; SP-R13;			Comment 01-27, 05-90, and 05-100 from Draft SD1, Appendix C
RE142	Add gold mining historical interpretive exhibit along Feather River South of Riverbend Park, i.e. Antique Dredger.	SP-R7; SP-R9; SP-R13;			Comment 01-28 and 05-91 from Draft SD1, Appendix C
RE143	Investigate Tribal Cultural Center site along the Feather River South of Riverbend Park	SP-R7; SP-R9; SP-R13; SP-C3			Comment 01-29 and 05-92 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE144	Community swimming facility at Bedrock Park				Comment 01-30 and 05-93 from Draft SD1, Appendix C
RE145	Restore river corridor to its natural condition from Oroville Dam to the Wildlife area.	SP-R7; SP-R9; SP-R13;			Comment 01-31 and 05-94 from Draft SD1, Appendix C
RE146	Consider alternate site for 9-hole golf course adjacent to hwy 70 and north of Feather River			X	Comment 01-32, 05-95, and 05-101 from Draft SD1, Appendix C Outside FERC Project Boundary
RE147	Consider restoring the flash dam in the Feather River, i.e. power boat races				Comment 01-33, 05-96, and 05-103 from Draft SD1, Appendix C Potential environmental impacts to endangered species suggest this is not feasible. Confirmed with Environmental Work Group.
RE148	Create a transportation link on the old RR alignment from Diversion Pool to the Wildlife area	SP-R18; SP-R19			Comment 01-34, 05-97, and 05-104 from Draft SD1, Appendix C
RE149	Relocate industrial uses between Feather River and Hwy 70 and improve scenic values at the entry to the City of Oroville.			X	Comment 05-98 and 05-106 from Draft SD1, Appendix C Outside FERC Project Boundary

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE150	Improve existing Off-Highway Vehicle Recreation area.	SP-R7; SP-R9; SP-R13;			Comment 01-35 from Draft SD1, Appendix C Outside FERC Project boundary
RE151	Consider Afterbay as an alternative site for an equestrian center	SP-R7; SP-R9; SP-R13;			Comment 01-21 and 05-77 from Draft SD1, Appendix C
RE152	Boat in camps: Replace Pit Toilets with Vault Toilets (8 total)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Comment 02-01 from Draft SD1, Appendix C Restroom Upgrade is an Interim Recreation Project

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE153	Visitor Center: Upgrade directional signs, reconstruct sales counter, upgrade and redesign exhibits, modify restrooms, install assisted listening system in theater, install video camera on tower and monitor in the VC (ADA)	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Comment 02-02 from Draft SD1, Appendix C
RE154	Loafer Creek: Construct two group camps	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Comment 02-03 from Draft SD1, Appendix C
RE155	Bidwell Canyon: Enlarge Bidwell Canyon parking lot	SP-R1; SP-R17			Comment 02-05 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE156	Saddle Dam: Develop paved parking and restroom facility for equestrians	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Comment 02-06 from Draft SD1, Appendix C Saddle Dam Improvements is an Interim Recreation Project
RE157	Equestrian Campground: Overlay access road and camping spurs	SP-R1; SP-R17			Comment 02-07 from Draft SD1, Appendix C
RE158	Equestrian Campground: Enlarge and improve equestrian campground	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Comment 02-08 from Draft SD1, Appendix C Loafer Creek Equestrian Camp Improvements is an Interim Recreation Project

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE159	Enterprise Launch Area: Install block or concrete prefab restroom structure for vault holding tank	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Comment 02-09 from Draft SD1, Appendix C Upgrade Restrooms is an Interim Recreation Project
RE160	North Forebay: Install new shade ramadas, increase day use parking	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Comment 02-10 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE161	South Forebay: Design and construct shade ramadas, restroom facility (and sewer), electrical, turf and irrigation	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17			Comment 02-11 from Draft SD1, Appendix C
RE162	Investigate the feasibility of allowing migratory waterfowl hunting on both the Thermalito Forebay and Lake Oroville during the regular waterfowl-hunting season	SP-R4; SP-R17; SP-T1; SP-T8			Comment 04-01 from Draft SD1, Appendix C
RE163	Lake Oroville annual draw down schedule corresponds with the peak recreation use season	SP-R3			Comment 05-24 from Draft SD1, Appendix C Oroville Reservoir drawdowns are consistent with operational criteria as designed.
RE164	Lime Saddle Concessionaire on month to month tenancy	SP-R5			Comment 05-25 from Draft SD1, Appendix C
RE165	CDPR has its own statutory park master planning process involving the State Parks Commission and does not consider the Lake Oroville State Recreation Area to be subject to the FERC Alternative Licensing Process and the related recreation planning process that is underway	SP-R5		X	Comment 05-26 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE166	DPR has an antiquated cost accounting system, which does not isolate the Lake Oroville State Recreation Area from other State Park units in the State Park District as a whole	SP-R5		X	Comment 05-27 from Draft SD1, Appendix C
RE167	The capital improvement plan of CDPR for Lake Oroville State Recreation Area is not available to the public or coordinated with the CDWR capital improvement plan pursuant to the settlement agreement approved by FERC in so far as the public is made aware	SP-R5			Comment 05-28 from Draft SD1, Appendix C
RE168	Bridge selective fingers of lake to enhance trail use when lake is below high pool	SP-R1; SP-R3			Comment 05-29 from Draft SD1, Appendix C
RE169	Trail Plan Element to the Recreation Plan that considers (among other issues) ways and means to circumscribe the lake on the Dan Beebe Trail at both high and low pool	SP-R17			Comment 05-42 from Draft SD1, Appendix C
RE170	Loafer Creek swimming area feasibility study	SP-R17			Comment 05-43 from Draft SD1, Appendix C Height adjustable Swim Dock is an Interim Recreation Project
RE171	Bidwell Bar and Loafer Creek site plan studies	SP-R17			Comment 05-44 from Draft SD1, Appendix C
RE172	Management plan dealing with improving the coordination with and oversight of the Lime Saddle concession lease	SP-R5			Comment 05-45 from Draft SD1, Appendix C
RE173	Strategy plan to make Lime Saddle a “stand alone” facility with a “synergy of uses” and “critical mass”	SP-R17			Comment 05-46 from Draft SD1, Appendix C
RE174	20 year study of correlations between monthly lake elevations and Lake Oroville Recreation Area attendance by month	SP-R3			Comment 05-47 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE175	20-year study of Lake Oroville Recreation Area annual operations and maintenance costs and annual income by category of activity, i.e., boating, camping, day use	SP-R5			Comment 05-48 from Draft SD1, Appendix C
RE176	Supply and demand study for the next 50 years for Lake Oroville's share of the regional tourism market in Northern California			X	Comment 05-49 from Draft SD1, Appendix C
RE177	Study of revenue enhancement strategies in combination with appropriate private/public sector partnerships for the purpose of providing increased service that will reduce net operations and maintenance costs for existing and future recreation programs/improvements	SP-R18			Comment 05-50 from Draft SD1, Appendix C
RE178	Conflicts between State Parks staff and community desires concerning types of trails needed and accessibility of trail system in Diversion Pool Canyon	SP-R5; SP-R17			Comment 05-51 from Draft SD1, Appendix C
RE179	Conflicts between DWR operations and community desires concerning the use of the diversion dam surface as a trail link from one side of the Diversion Pool to the other	SP-R2; SP-R3			Comment 05-52 from Draft SD1, Appendix C
RE180	State Parks presently has no resources available to manage increased use of the Diversion Pool Canyon	SP-R5			Comment 05-53 from Draft SD1, Appendix C
RE181	What agency could best manage the Diversion Pool resource area?	SP-R5			Comment 05-54 from Draft SD1, Appendix C
RE182	Trail improvements that meet the needs of hikers, equestrians, and bicyclists and that provide connection to a regional trail network as set forth in a comprehensive trails plan element to the recreation plan	SP-R13; SP-R17			Comment 05-56 from Draft SD1, Appendix C
RE183	Acquisition of property on the south side of the Diversion Pool canyon for additional uses, i.e., equestrian special events center, picnicking, nature observation, fishing, trail use and low impact lodging (camping, B&B's Eco-lodge facility)		X		Comment 05-57 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE184	Use of DWR-owned land north of the diversion pool to Cherokee Rd for a Rodeo Grounds and Event Center	SP-R9; SP-R12; SP-R17			Comment 05-58 from Draft SD1, Appendix C Loafer Creek Equestrian Site Improvements and Group Staging Areas are Interim Recreation Projects
RE185	Extension of nature programs from existing nature center	SP-R9; SP-R13; SP-R17			Comment 05-59 from Draft SD1, Appendix C
RE186	Focused trail compatibility study in advance of a more comprehensive trail plan element to the recreation area	SP-R13			Comment 05-60 from Draft SD1, Appendix C
RE187	Feasibility of use of DWR property between the Diversion Pool and Cherokee Rd. being developed into a Rodeo and Event Center for the region.	SP-R9; SP-R12; SP-R17			Comment 05-61 from Draft SD1, Appendix C Loafer Creek Equestrian Site Improvements and Group Staging Areas are Interim Recreation Projects
RE188	Feasibility study of relocating the DWR Maintenance facility at the Diversion Pool				Comment 05-62 from Draft SD1, Appendix C No facility re-location is contemplated at this time.

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE189	Feasibility study of establishing an equestrian event center	SP-R9; SP-R12; SP-R17			Comment 05-63 from Draft SD1, Appendix C Loafer Creek Equestrian Site Improvements and Group Staging Areas are Interim Recreation Projects
RE190	Feasibility study of establishing a rodeo and special event facility	SP-R9; SP-R12; SP-R17			Comment 05-64 from Draft SD1, Appendix C Loafer Creek Equestrian Site Improvements and Group Staging Areas are Interim Recreation Projects
RE191	Governance study for this resource area	SP-R5			Comment 05-65 from Draft SD1, Appendix C
RE192	Other sites Thermalito Forebay being considered for a new regional visitor center	SP-R9; SP-R12; SP-R17			Comment 05-66 from Draft SD1, Appendix C
RE193	What agency could best manage the Thermalito Forebay resource area?	SP-R5			Comment 05-67 from Draft SD1, Appendix C
RE194	Recreation related economic development, i.e., golf course/ conference center, lodging, restaurants, etc.(take advantage of existing infrastructure)	SP-R17; SP-R18			Comment 05-68 from Draft SD1, Appendix C
RE195	State Parks new visitor center site	SP-R9; SP-R12; SP-R17			Comment 05-69 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE196	Special events venue, i.e., power boat racing	SP-R17			Comment 05-70 from Draft SD1, Appendix C Group Staging Area and Tournament Water Ski Site are Interim Recreation Projects
RE197	Regional visitor center site study	SP-R9; SP-R12; SP-R17			Comment 05-71 from Draft SD1, Appendix C
RE198	Market demand study for year-round public/private sector development with recreation amenities			X	Comment 05-72 from Draft SD1, Appendix C
RE199	Governance study for this resource area	SP-R5			Comment 05-73 from Draft SD1, Appendix C
RE200	Future residential development around the Afterbay could conflict with some active recreation activity, i.e., jet skiing, boat racing, etc	SP-L1; SP-R9; SP-R12			Comment 05-74 from Draft SD1, Appendix C
RE201	4-5 feet per day fluctuation constrains some water related recreation uses and body contact uses (muddy shoreline)	SP-R3			Comment 05-75 from Draft SD1, Appendix C
RE202	City of Oroville growth projections around Forebay	SP-L1			Comment 05-81 from Draft SD1, Appendix C
RE203	Equestrian center location study (Proposed at Diversion Pool and Forebay)	SP-R9; SP-R12; SP-R17			Comment 05-82 from Draft SD1, Appendix C Loafer Creek Equestrian Camp Improvements and Group Staging Areas are Interim Recreation Projects

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE204	Significant damage has occurred to natural values at Feather River between Oroville Dam to Gridley	SP-R3; SP-R4; SP-R11; SP-T3/5			Comment 05-83 from Draft SD1, Appendix C
RE205	Conflict with State Parks on site for future regional visitor center Feather River between Oroville Dam to Gridley	SP-R5L SP-R17			Comment 05-84 from Draft SD1, Appendix C
RE206	How to reconnect the river with the city, i.e., physically, visually, emotionally, culturally?			X	Comment 05-85 from Draft SD1, Appendix C
RE207	Low flow (400-600 cfs.) and cold water for fish constrains public use of river for body contact recreation	SP-R3; SP-R4			Comment 05-86 from Draft SD1, Appendix C
RE208	Close former City Park at Feather River between Oroville Dam to Gridley			X	Comment 05-87 from Draft SD1, Appendix C
RE209	Fish hatchery visitor facilities and associated landscaping needs renewal and ongoing maintenance	SP-R10; SP-R11			Comment 05-88 from Draft SD1, Appendix C Fish Hatchery Landscaping is an Interim Recreation Project
RE210	Opportunity and constraints analysis of each resource groups 1-8			X	Comment 05-108 from Draft SD1, Appendix C
RE211	Synchronized planning between CDWR, CDPR, CDFG, LOJPA, and units of local government	SP-R5			Comment 05-109 from Draft SD1, Appendix C
RE212	A financial audit of the Lake Oroville State Recreation Area attendance, revenues, and costs for the past 10 years is needed to establish a baseline for present and future service levels and operations and maintenance impact studies	SP-R17			Comment 05-110 from Draft SD1, Appendix C

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE213	Supply and demand study for water related outdoor recreation opportunities within a 150 mile radius of Lake Oroville	SP-R17			Comment 05-111 from Draft SD1, Appendix C
RE214	Regional tourism marketing study for the LORA	SP-R18			Comment 05-112 from Draft SD1, Appendix C
RE215	Weather impact study for the LORA			X	Comment 05-113 from Draft SD1, Appendix C
RE216	Warm water swimming area feasibility study within the LORA	SP-R9; SP-R19; SP-R17			Comment 05-114 from Draft SD1, Appendix C
RE217	Project economic feasibility studies as appropriate				Comment 05-115 from Draft SD1, Appendix C
RE218	Governance study of the best way to manage the LORA and its separate components	SP-R5			Comment 05-117 from Draft SD1, Appendix C
RE219	Determine Capital improvement and triggers for the next 50 years.			X	Comment 05-118 from Draft SD1, Appendix C
RE220	Review of existing planning studies relative to Lake Oroville and comparable reservoirs in the state of California	SP-L3			Comment 05-119 from Draft SD1, Appendix C
RE221	Licensee as responsible to FERC for a recreation plan, needs to plan in detail enough that DPR will not be the only one to plan the details for recreation facilities for any part of the project	SP-R5; SP-R12			

Draft SD1 Appendix B Reference #	Recreation and Socioeconomics Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
RE222	Foreman Creek: Develop vault toilet facility.	SP-R1; SP-R5; SP-R6; SP-R7; SP-R8; SP-R9; SP-R10; SP-R11; SP-R12; SP-R13; SP-R15; SP-R16; SP-R17;			Comment 02-12 from Draft SD1, Appendix C

NON – RESOURCE SPECIFIC COMMENTS

The following comments came from the Draft SD1 Appendix C and did not address resource issues or were not applicable to the relicensing process. The reference number below corresponds to the comment number from the Draft SD1 Appendix C.

Draft SD1 Appendix C Reference #	Non-Resource Specific Comments Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
05-02	When consolidating comments from all workgroups, add “water contact recreation” to the list of effects to be studied. This wording should be added to W10 and W14.				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-03	In regards to Item R1. <u>Determine</u> adequacy of existing project recreation facilities, opportunities, and access to accommodate current use and future demand				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-04	In regards to Item R2. <u>Determine</u> adequacy of public safety at the Oroville Project recreation facilities				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-05	In regards to Item R3. <u>Determine</u> effects of <u>hydroelectric and water works</u> facilities operations on <u>present and future</u> recreation and socioeconomic opportunities				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.

Draft SD1 Appendix C Reference #	Non-Resource Specific Comments Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
05-06	In regards to Item R 4. Reword: Determine “best practice” operations and maintenance standards for reservoir operations and apply criteria to Lake Oroville Recreation Area’s present practice to determine existing O&M deficiencies				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-07	In regards to Item R5. Reword to: Project applicant provide, as a project cost, funding for the development, operations and maintenance of future recreation enhancement programs and improvements pursuant to new FERC License agreement				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-08	In regards to Item R6. Reword to: Determine if present and proposed management of fisheries and wildlife resources can be modified to provide enhanced recreation opportunities as a project cost.				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-09	Conduct operations and maintenance impact studies for all proposed recreation programs/facilities using “best practice” operations and maintenance standards				Not applicable. This comment suggests a new issue statement not acted upon by the collaborative.
05-10	In regards to Item S1. Reword to: How are outdoor, water based recreation opportunities related to economic development and regional tourism, and can enhancements be made to the current inventory of recreation programs/improvements that will stimulate economic development?				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-11	In regards to Item S2. Reword to: Determine the feasibility of providing a project benefit to the community, by discounting the sale of power or providing in-kind services (electricity) to the community surrounding Lake Oroville as a stimulus to economic development of industry in the area				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.

Draft SD1 Appendix C Reference #	Non-Resource Specific Comments Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
05-12	Determine the negative impact of the loss of recreation opportunities and corresponding spending in the local economy as a result of the severe draw down of Lake Oroville from May through September each year (the peak season for reservoir operations in California)"				Not applicable. This comment suggests a new issue statement not acted upon by the collaborative.
05-13	Determine ways and means to mitigate low attendance because of the negative impact of low water elevations during May to September relative to the elevation at which developed high pool shoreline recreation facilities are located"				Not applicable. This comment suggests a new issue statement not acted upon by the collaborative.
05-14	Develop appropriate services and appropriate revenue enhancement strategies in conjunction with private enterprise for future recreation improvement clusters related to Lake Oroville Recreation Area resource areas				Not applicable. This comment suggests a new issue statement not acted upon by the collaborative.
05-16	In regards to E4: Add to the end of the sentence. "and present and future proposed recreation programs and facilities"				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-17	In regards to E6: Add to the end of the sentence "and present and future proposed recreation programs and facilities"				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-18	In regards to E7: Add to the end of the sentence "including the impacts on existing and proposed recreation programs and facilities"				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.

Draft SD1 Appendix C Reference #	Non-Resource Specific Comments Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
05-19	In regards to E8: Add to the end of the sentence, "including existing and proposed recreation programs and facilities"				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-20	In regards to E10 Reword to: Effect of future water demands on project operations including power generation, lake levels downstream flows <u>and present and proposed recreation programs and facilities</u> . Consider sale of existing water allotments to downstream users				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-21	In regards to E12: Add additional sentence, "Also, evaluate the impact of each model on present and future proposed recreation programs and facilities"				Not applicable. This comment proposes a revision to an issue statement developed by the collaborative.
05-22	It is recommended that the DWR staff sort all of the items in Exhibit B using a similar system to that proposed above and then return the organized data to the Work Groups and the Plenary Group for further processing				Comment noted.
05-23	DWR should sort our recreation issues, concerns, and comments from Appendix B according to the respective geographical recourse area in which they may occur (e.g. Group 1. Oroville Reservoir; Group 2. Diversion Pool; Group 3. Forebay; Group 4. Afterbay; Group 5. Feather River (Oroville Dam to Gridley); Group 6. Wildlife Area; Group 7. ALP FERC Project 2100 in General)				Comment noted.
05-107	Inventory and analysis on all regional resources (cultural, archeological, recreation, fish & wildlife, open space, agriculture, etc.)				Comment noted. This is a requirement of the relicensing process.

Draft SD1 Appendix C Reference #	Non-Resource Specific Comments Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
05-116	Engineering feasibility studies as appropriate				Comment noted. This is a requirement of the relicensing process.
06-01	Request for full public review, participation, and disclosure in the CEQA – NEPA process				Comment noted. This is a requirement of the relicensing process.
06-02	Project location should include other SWP facilities			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-03	Project description should include other SWP facilities			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-04	The project description should include Harvey O Banks Pumping Plant			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-05	Project description should include the California Aqueduct			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-06	The project description should include the Oroville Wildlife Area				This area is included within the Oroville Facilities description and will be included in the relicensing process.

Draft SD1 Appendix C Reference #	Non-Resource Specific Comments Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
06-07	The project description should include Lake Davis			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-08	The project description should include Frenchman Reservoir			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-09	The project description should include the State Water Project			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-10	Cumulative impacts of the whole project should be considered and disclosed				Comment noted. This is a requirement of the regulatory process.
06-11	Request for joint preparation of an EIR/EIS				Comment noted.
06-18	The environmental document should include a biological assessment and biological opinion.				Comment noted
06-21	Disclose operation and management of the Hatchery by CDFG under the new license				Comment noted.
06-24	Re-evaluate the Post Oroville Projects Fishery Study and implementation				Not applicable. The current studies will supersede the older ones.
06-27	Consider operation of the Thermalito Afterbay Reservoir as a closed reservoir system for fisheries benefits				Not applicable. Operational constraints require that water is returned to the river.

Draft SD1 Appendix C Reference #	Non-Resource Specific Comments Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
06-32	Improve the public boat launching facility at Honker Cover Boating Launching Facilities at Lake Davis			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-33	Improve the public boat launching facility at Lighting Tree Boating Launching Facilities at Lake Davis			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-34	Improve the public auto access to the Camp 5 Boating Launching Facilities at Lake Davis by improving paved and unpaved roads.			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-35	Evaluate the funds paid annually for recreation facilities at Lake Davis			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-36	Evaluate agreements between DWR and USFS for recreation facilities at Lake Davis			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-37	Evaluate restrictions on water skiing and power watercrafts to the southern portion of Frenchman Reservoir, to reduce the conflict with fishing activities			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-39	Consider water rights for Feather River underflow			X	Not applicable. This is a non-jurisdictional issue.
06-40	Consider the water rights for storage, diversion, and use of water from the Afterbay Reservoir Pumps			X	Not applicable. This is a non-jurisdictional issue.

Draft SD1 Appendix C Reference #	Non-Resource Specific Comments Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
06-41	Evaluate project conflicts with the area of origin filings by the SWRCB for Plumas & Butte Counties and South Delta			X	Not applicable.
06-43	Disclose power generation, expenditures, and revenue associated with the Oroville Facilities				Comment noted. This will be included in the draft application, Exhibit D, in keeping with the FERC requirements.
06-45	Disclose all agreements associated with water diversion at the State Pumps in the South Delta and consider the cumulative effects on water quality and water quantity			X	Not applicable. This request is outside the boundaries of the FERC defined Oroville Facilities.
06-49	Disclose all water rights, for storage, diversion, re-diversion, and use.			X	Not applicable. This is a non-jurisdictional issue.
06-62	Evaluate Feather River flows to the Delta when the Lower Yuba River water is transferred.			X	Not applicable.
06-65	Provide hydrologic data for water use at Oroville, the State Pumps in the South Delta, and California Aqueduct				Comment noted.
06-66	Consider cumulative effects for all issues and concerns listed in Appendix B				Comment noted.
06-67	Comply with the CEQA Guidelines				Comment noted.
06-68	Evaluate the 4(e) conditions for compliance with the Forest Land and Resources Management Plan				Comment noted.
06-69	Evaluate preliminary 4(e) conditions for direct, indirect, and cumulative effects on the environment				Comment noted.

Draft SD1 Appendix C Reference #	Non-Resource Specific Comments Master List	Effects Studies	Potential Settlement Issue	Not a Relicensing Issue	Notes
06-70	Evaluate final 4(e) conditions for direct, indirect, and cumulative effects on the environment				Comment noted.

Appendix C

Summary of Studies Related to Oroville Facilities

APPENDIX C SUMMARY OF STUDIES RELATED TO OROVILLE FACILITIES

INTRODUCTION

A number of environmental studies are related to the Oroville Facilities. These studies complement the studies developed in the collaborative and contribute toward meeting basic FERC relicensing requirements for the PDEA. Results of these studies will also be used by the Work Groups to help identify areas where further investigation may be needed. These studies are summarized below.

WATER QUALITY

Temperature Model. DWR has been monitoring temperature changes in the Feather River, Thermalito Afterbay, and Thermalito Forebay. A river temperature model, developed by the University of California at Davis (UC Davis) will inform Oroville Project operators on how specific water releases affect temperatures throughout the lower river and will help predict the likely impact of the temperature on river fisheries, recreation, agricultural diverters and the hatchery operations.

AQUATIC RESOURCES

Steelhead Snorkel Surveys. In 1999, DWR focused on determining where juvenile steelhead rear their young and their relative abundance above and below the Thermalito Afterbay outlet. Additionally, DWR identified the types of habitat that juvenile steelhead prefer and their relative availability within the river. Side (secondary) channels within the Low Flow Channel were identified as high density rearing areas.

Snorkel surveys are also being conducted to monitor adult steelhead in the river. The goals are to identify migration timing, determine the number of naturally spawning fish in the population, and locate preferred spawning grounds. Preliminary information suggests that there may be two separate runs of steelhead in the Feather River, one in the winter and one in the spring/summer.

Steelhead Habitat Survey. As part of the steelhead and salmon studies, the Geographic Information Center at California State University at Chico mapped the riparian vegetation of the Feather River. The mapping provides a general overview of the status of the riparian forest but does not provide the small-scale data needed to determine what type of cover is available for steelhead. Therefore, the river's microhabitats are being remapped to count the number and describe the quality of riparian habitat available to rear juvenile steelhead.

Beach Seine Surveys. Beach seine surveys will continue to be conducted monthly to determine the temporal and spatial rearing extent of juvenile steelhead and salmon. Survey sites range from Hatchery Ditch to Boyd Pump boat ramp. Beach seine surveys indicate that a small number of salmon (5,000-15,000) remain in the river throughout the summer and probably migrate in the fall. Beach seining also reveals that few steelhead rear their young for any length of time below the Thermalito Afterbay outlet.

Rotary Screw Trap Sampling, Fyke Sampling, Hatchery and In-Channel Coded Wired Tagging. Rotary screw fish traps will continue to be placed at two locations in the Feather River to monitor the timing and number of Chinook salmon emigrants. As part of screw trap sampling, staff will continue to tag naturally produced fall-run Chinook salmon with a coded wire tag to compare their return success with that of hatchery releases. As fish return over the next several years, we will analyze these data. DWR tagged approximately 65,000 juvenile salmon in 1998, 135,000 in 1999, and 150,000 in 2000.

DWR has also investigated the production of juvenile salmon and steelhead from a small side channel called Hatchery Ditch. In the 1999-2000 emigration period, DWR trapped approximately 94,000 juvenile fall Chinook in Hatchery Ditch.

Egg Survival Studies and Spawning Aerial Surveys. Aerial photographs of spawning sites and in-channel egg survival studies provide information on the amount of habitat used for spawning and the relative egg survival at different river reaches. Egg survival studies conducted by DWR in 1998 and 1999 revealed that survival is reduced as salmon move upstream. The main cause for the reduction in survival may be egg superimposition caused by the large number of adults crowding into the Low Flow Channel. The number of spawning Chinook salmon in most years greatly exceeds the available habitat. For example, 1999-00 emigration data from Hatchery Ditch (a small side channel in LFC) reveal that the actual survival from egg deposition to emergence from the gravel may only be between 5 and 15 percent. Egg superimposition is clearly reducing survival due to the high number of adult spawners in such a small area, since approximately 2,000 female and 1,300 male fall-run Chinook died in Hatchery Ditch in 1999, while only 1,000 females actually spawned.

Spawning Escapement Surveys. Past Chinook salmon adult escapement (carcass) surveys have been conducted by DFG. Estimates of the spawning run range from a low of 10,000 in 1979 to a high of 86,000 in 1955. The 1969-89 period is somewhat stable compared to pre-Oroville Dam estimates. These estimates ranged from roughly 10,000 salmon in 1953 to 86,000 in 1955. The stability after Oroville Dam is likely due to hatchery influence. Before 1967, all Chinook salmon in the Feather River spawned in the river. Estimates for the number of wild Chinook spawning in the Feather River since project construction are not available. Escapement estimates of adult Chinook salmon since project completion have included both wild and hatchery salmon that spawned in the river. As coded wire tag data are recovered over the next several years, more information will be available on the number of wild Chinook salmon spawning in the Feather River. DWR and DFG are working to refine adult Chinook salmon escapement estimates.

Redd Dewatering and Juvenile Stranding Surveys. Because the Oroville Dam-Thermalito Complex often varies flows for water operations and Delta requirements, concern exists about the impact of varying water flows on redd dewatering and juvenile stranding. Each October 15, the flows in the lower reach of the Feather River (below Thermalito Afterbay) are reduced, dewatering some redds. Recent studies conducted by DWR demonstrate two very important points: (1) the great majority of fall-run Chinook salmon spawn in the low flow section of the river and are therefore not subjected to redd dewatering; and (2) some redd dewatering does occur in the lower reach but is minimal compared to total run size (approximately 0.3-1 percent of the redds are dewatered, depending on the number of spawners in any given year and the timing of spawning).

Additionally, juvenile stranding (in off-channel ponds) can occur during high flow events and even during normal operations. Some stranding, typically associated with higher flow events (>25,000 cfs), has occurred within normal river operations. DWR has substantially increased its effort to evaluate both juvenile stranding, and redd dewatering. DWR will also revisit the ramping criteria - how fast the flows are reduced at the Thermalito Afterbay Outlet - to determine the benefit of adjusting criteria to allow juveniles to move out of potential stranding areas as flows are dropped.

Steelhead Self-Creel Surveys. DWR is currently working with several local anglers to gather more detailed information on the life history of Feather River adult steelhead. Data collection includes the size of fish caught, whether the fish are wild or of hatchery origin, general coloration, and whether the fish are kept or released. More data is needed to assess whether there are two runs of steelhead in the Feather River.

Invertebrate Research: To learn more about what may be limiting to juvenile steelhead in the lower Feather River, DWR, in cooperation with CSU, Chico, is conducting an invertebrate study. This study has three main goals: (1) to determine differences in the invertebrate populations above and below the Thermalito Afterbay Outlet; (2) to determine differences in invertebrate populations between the main channels and nearby side (secondary) channels; and (3) to determine diet preferences by examining stomach contents of juvenile salmon and steelhead.

Appendix D

Study Plans Under Implementation

APPENDIX D

STUDY PLANS UNDER IMPLEMENTATION

The Oroville Relicensing ALP has allowed stakeholders from federal, State and local governments and resource agencies, Indian Tribes, NGOs, and individuals to cooperatively develop 71 study plans. Study plans have been developed by resource-specific Task Forces and Work Groups, and reviewed by the Plenary Group participants for consensus. Study plans have been developed to address issues identified during the formal scoping process and series of public meetings and to fulfill regulatory requirements associated with relicensing.

Study plans were developed at resource-specific Task Force and Work Group meetings, based on issue sheets, stakeholder participation, and comments on Draft SD1. Appendix B of this Final SD1 includes all of the issues, concerns, and comments identified in Appendix B and C of Draft SD1. Appendix B lists each issue, concern, or comment and tracks the issue through the ALP by identifying relevant studies or where the issue is expected to be addressed. This appendix allows for tracking through study plans and settlement.

The Plenary Group meets regularly to discuss issues and review the progress of all Work Groups. The Plenary Group has reviewed the study plans, focused Work Groups on important subjects, and reached consensus on final study plans. Copies of the study plans can be obtained from Sue Larsen at DWR (916-653-4658).

Note: Critical Path Studies in Bold

Land Use, Land Management and Aesthetics

- SP-L1 Land Use**
- SP-L2 Land Management
- SP-L3 Comprehensive Plan Consistency
- SP-L4 Aesthetics**
- SP-L5 Fuel Load Management

Recreation and Socioeconomics

- SP-R1 Public and Private Vehicular Access
- SP-R2 Recreation Safety Assessment
- SP-R3 Assess Relationship of Project Operations and Recreation
- SP-R4 Assess Relationship of Fish/Wildlife Management and Recreation
- SP-R5 Assess Recreation Areas Management
- SP-R6 ADA Accessibility Assessment

SP-R7 Reservoir Boating Survey

SP-R8 Carrying Capacity Study

SP-R9 Existing Recreation Use Study

SP-R10 Recreation Facility and Condition Inventory

SP-R11 Recreation and Public Use Impact Assessment

SP-R12 Projected Recreation Use

SP-R13 Recreation Surveys

SP-R14 Assess Regional Recreation and Barriers to Recreation

SP-R15 Recreation Suitability Study

SP-R16 Whitewater and River Boating

SP-R17 Recreation Needs Analysis

SP-R18 Recreation Activity, Spending, and Associated Economic Impacts

SP-R19 Fiscal Impacts

Engineering and Operations

SP-E1 Model Development

SP-E1.1 Statewide Operations Model Development

SP-E1.2 Local Operations Model Development

SP-E1.3 Oroville Reservoir Temperature Model Development

SP-E1.4 Thermalito Complex Temperature Model Development

SP-E1.5 Feather River Temperature Model Development

SP-E2 Perform Modeling Simulations

SP-E3 Evaluate the Potential for Additional Hydropower Generation at Oroville

SP-E4 Flood Management Study

SP-E6 Downstream Extent of Reasonable Control of Feather River Temperature by Oroville-Thermalito

SP-E7 Oroville Reservoir Cold Water Pool Evaluation

SP-E8 Temperature Impacts of Pumpback Operation on Oroville Reservoir Cold Water Pool

Cultural Resources

- SP-C1 Cultural Resources Inventory**
- SP-C2 Cultural Resources Evaluation
- SP-C3 Cultural Resources Management
- SP-C4 Cultural Resources Interpretive Evaluation

Environmental - Terrestrial

- SP-T1 Effects of Project Features and Operation on Wildlife and Wildlife Habitat
- SP-T2 Project Effects on Special Status Species**
- SP-T3/5 Riparian Resources, Wetlands and Associated Floodplains
- SP-T4 Biodiversity, Vegetation Communities and Wildlife Habitat Mapping**
- SP-T6 Interagency Wildlife Management Coordination and Wildlife Management Plan Development
- SP-T7 Project Effects on Noxious Terrestrial and Aquatic Plant Species
- SP-T8 Project Effects on Non-Native Wildlife
- SP-T9 Recreation and Wildlife
- SP-T10 Effects of Project Features, Operations, and Maintenance on Upland Plant Communities
- SP-T11 Effects of Fuel Load Management and Fire Prevention on Wildlife and Plant Communities

Environmental - Geomorphology

- SP-G1 Effects of Project Operations on Geomorphic Processes Upstream of Oroville Dam**
- SP-G2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam

Environmental – Water Quality

- SP-W1 Project Effects on Water Quality Designated Beneficial Uses for Surface Waters**
- SP-W2 Contaminant Accumulation in Fish, Sediments and the Aquatic Food Chain**
- SP-W3 Recreational Facilities and Operations Effects on Water Quality
- SP-W5 Project Effects on Groundwater

- SP-W6 Project Effects on Temperature Regime
- SP-W7 Land and Watershed Management
- SP-W9 Project Effects on Natural Protective Processes

Environmental – Fisheries

- SP-F1 Evaluation of Project Effects on Non-fish Aquatic Resources**
- SP-F2 Evaluation of Project Effects on Fish Diseases**
- SP-F3.1 Evaluation of Project Effects on Fish and Their Habitat within Lake Oroville, it's Upstream Tributaries, the Thermalito Complex, and the Oroville Wildlife Area**
- SP-F3.2 Evaluation of Project Effects on Non-salmonid Fish in the Feather River Downstream of the Thermalito Diversion Dam**
- SP-F5/7 Evaluation of Fisheries Management on Project Fisheries**
- SP-F8 Transfer of Energy and Nutrients by Anadromous Fish Migrations
- SP-F9 Evaluation of the Feather River Hatchery Effects on Naturally Spawning Salmonids**
- SP-F10 Evaluation of Project Effects on Salmonids and their Habitat in the Feather River Below the Fish Barrier Dam.**
- SP-F15 Evaluation of the Feasibility to Provide Passage for Targeted Species of Migratory and Anadromous Fish Past Oroville Facility Dams
- SP-F16 Evaluation of Project Effects on Instream Flows and Fish Habitat**
- SP-F21 Project Effects on Predation of Feather River Juvenile Anadromous Salmonids

Study Plans Still Under Consideration

- SP-E1.6 Feather River Flow-Stage Model Development

Appendix E

Comments on Draft SD1 and DWR Responses

APPENDIX E
COMMENTS ON DRAFT SD1 AND DWR RESPONSES

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APPENDIX E

COMMENTS ON DRAFT SD1 AND DWR RESPONSES

1.0 INTRODUCTION

On September 27, 2001, the California Department of Water Resources (DWR) issued the Draft SD1 for relicensing the Oroville Facilities. Following issuance of that document, DWR held two scoping meetings and one facilities site visit in October 2001. The scoping meetings were conducted to provide interested parties an opportunity to comment on the Draft SD1. Comments were received as written statements submitted to DWR and verbal statements provided at the two public meetings. The comments and public meeting transcripts were reviewed and responses developed by DWR. This Appendix E provides a description of the comment receipt and review process along with the associated documentation.

Following the release of the Draft SD1, DWR received 25 written comment statements from federal and State agencies; various stakeholder groups; members of the public; and several water contactors. In addition, testimony was provided at the public meetings. The comment/response tables in Attachment 1 provide a summary and response to the written comments and address testimony recorded during the public meetings. In addition to the comment and response, each table includes the source of the comment (organization and/or individual) along with the date of receipt for written comments. DWR reviewed the written statements and public meeting record and identified 208 specific comments on the written statements and 79 on the public meeting record. Each comment in the tables has been numbered to correspond to the same number placed on the written statements and public meeting records. Copies of the written statements are provided in Attachment 2 and the public meeting record is available upon request or can be viewed at the DWR web site for relicensing the Oroville Facilities (<http://orovillereicensing.water.ca.gov>). The comment statements (letters and written statements) are organized in a manner that allow the reader to locate a specific letter, identify a comment, locate the comment on the comment summary table in Attachment 1, and review the DWR response. The stakeholder groups providing written statements and public meeting speakers included the following:

Federal Agencies

National Park Service	F-01
Plumas National Forest	F-02
National Marine Fisheries Service	F-03

Stakeholder Groups

California Business Properties Association	G-01
California Chamber of Commerce	G-02
Association of California Water Agencies	G-03
California Independent System Operator	G-04
Oroville Foundation of Flight	G-05
Southern California Water Committee (Anderson Dym)	G-06
Southern California Water Committee (Vanden Heuvel)	G-07
PaleoResource Consultants	G-08
F.D. Pursell, Civil Engineering Services	G-09

State Agencies

Electrical Oversight Board	S-01
State Water Resources Control Board	S-02
California Department of Fish and Game	S-03
California Department of Fish and Game	S-04
California Department of Fish and Game	S-05

State Water Contractors

State Water Contractors	W-01
Kern County Water Agency	W-02
Alameda County Flood Control and Water Conservation District	W-03
Castaic Lake Water Agency	W-04
Metropolitan Water District	W-05
Santa Clara Water District	W-06
State Water Contractors	W-07
Feather River Diverters	W-08

Public Hearing Speakers – Oroville, CA, October 29, 2001

Robert Fehlman, representing Joint Board and Western Canal Water District
Floyd Higgens, representing Oroville Model Airplane Club
Ron Turner, representing Oroville Foundation of Flight
Rob MacKenzie, representing Butte County
Mike Kelley, representing Butte County Taxpayers Association
Peter Maki, representing Feather River Nature Center
Ron Davis, representing California State Horseman's Association
Kathy Hodges, representing Equestrian Trail Riders and Hikers

Public Hearing Speakers – Sacramento, CA, October 30, 2001

Mike Wade, representing California Farm Water Coalition
John Coburn, representing State Water Contractors
Mary Lou Cotton, representing Castaic Lake Water Agency
Dan Smith, representing Association of California Water Agencies
Nan Nalder, representing California Chamber of Commerce
Ed Ely, representing California Business Properties Association
Geoffrey Vanden Heuvel, representing Southern California Water Committee
Vincent Wong, representing Alameda County Flood Control and Water Conservation District
Wilson Head, representing California Independent System Operator
Don Marquez, representing Kern County Water Agency
Lisa Wolfe, representing State Electricity Oversight Board
Ken Kules (for Tim Quinn), representing Metropolitan Water District

2.0 DWR REVIEW OF STAKEHOLDER COMMENTS ON DRAFT SD1

The public meeting transcripts and written statements were carefully reviewed to identify specific comments. The review consisted of identifying comment text within the letters and transcripts, bracketing the text in the right margin, and assigning an alpha-numeric code near the

bracket. To facilitate comment review, the written statements were divided into four groups with each written statement containing a corresponding letter designation:

- F – Federal Agency
- G – Stakeholder Group
- S – State Agency
- W – Water Contractor

The alpha-numeric scheme employed to identify individual comments consisted of sequential numbers for comment letters and group designation letters. For example: F-02-03 is interpreted as follows: the second written comment statement received from a federal agency (F-02). On that letter “03” represents the third identified comment for which a response has been prepared. The public transcript records were handled in a similar manner. The meeting held in Oroville on October 29, 2001 is designated as “M1” so all comments on the transcript are preceded with that identifier. Likewise, the meeting held in Sacramento on October 30, 2001 is designated as “M2.” There were multiple speakers at each meeting, so the M1 and M2 are followed by a number such as “05” representing the fifth speaker. Finally, for that speaker, a number of comments were identified and these are noted in sequential order. Therefore, M1-05-07 identifies the seventh comment, of the fifth speaker at the first public meeting in Oroville. Copies of the written statements are included in Section 5.0 of this appendix.

Comment summary tables were prepared containing the alpha-numeric code; identification of comment source (organization and/or individual); a summary of the identified comment; and a response prepared by DWR. The comment tables are located in Attachment 1 of this Appendix E and are organized in two separate sets. The first set is labeled “Summary of Written Comments on the Draft SD1 and DWR Responses” and corresponds to the written comment statements received during public review of the Draft SD1. The second set is labeled “Summary of Comments from the Public Meetings and DWR Responses” and corresponds to the speaker-presented comments at the two public meetings. Many of the comments received by stakeholders were addressed during development of the study plans.

3.0 ALP Progress

Since the release of Draft SD1, DWR and the ALP have addressed stakeholder concerns for the existing license conditions, interim projects, and coordination with comprehensive water planning efforts. The following is a summary of DWR’s efforts at addressing these topics.

3.1 Existing License Conditions

The FERC records indicate that DWR has complied with all of the articles of the current license for P-2100. These public records can be reviewed from the FERC website, and at the FERC offices in San Francisco and Washington DC. The ALP process has been developed to address public concerns over the next license term. DWR has proposed to conduct a series of studies that will guide the implementation of the next FERC license, including facility operations, maintenance, and improvements.

3.2 Interim Projects

DWR is implementing several interim projects that will be part of a comprehensive settlement package. Interim projects will be implemented under the terms and conditions of the existing license, no amendment of the existing license will be required to implement the interim projects. These projects have been developed by the Recreation Work Group and are currently being reviewed for implementation by the Oroville Field Division of DWR. This review includes an environmental and regulatory assessment to identify permit requirements prior to implementation. The projects are grouped into four categories and include:

Category I – Implement with minimum environmental review planning and design

- Restroom upgrades
- Loafer Creek equestrian camp improvements
- Group staging areas
- Bidwell Exhibit
- Saddle Dam improvements
- Lake Oroville overlook improvements 1
- Shooting range
- Warning system for water releases
- Model airplane site improvement
- Reseed Oroville Dam face
- Fish hatchery landscaping
- Improve day use parks

Category II – Requires involved environmental review, planning, and design

- Vehicle access at Lakeland Boulevard
- Tournament water ski site
- Develop a demonstration parallel mountain bike trail

Category III – Needs further analysis, consider impacts on resources

- Height adjustable swim dock
- Winterize floating campsites
- Lake Oroville overlook improvement 2
- Upgrade roads to facilities
- Seaplane base

Category IV – Ongoing efforts, continue working group discussion

- Promote existing facilities
- Boating safety training
- Investigate funding source for recreation development

3.3 Relicensing Coordination with Comprehensive Proceedings

DWR is currently participating in several Statewide water planning efforts including CALFED, the USACE Sacramento and San Joaquin River Basins Comprehensive Study, as well as the Bureau of Reclamation's Central Valley Improvement Program. DWR participation includes management, cost sharing, and study implementation. The relicensing efforts for the Oroville Facilities will not duplicate these planning efforts. Studies conducted for the relicensing program will focus on the effects of the Oroville Facilities. When available, the relicensing studies will incorporate existing information developed by these planning efforts.

Appendix E
Attachment 1

Comment Summaries and Responses

APPENDIX E, ATTACHMENT 1

Summary of Written Comments on the Draft SD1 and DWR Responses

Comment Number	Source	Summary of Comment	Response
F-01-01	National Park Service, California Hydro Program November 16, 2001	NPS supports DWR's decision to pursue the Alternative License Process. In addition, the communications protocol has been well implemented.	Comment noted.
F-01-02	National Park Service, California Hydro Program November 16, 2001	The installation of Obermeyer gates on the emergency spillway ogee crest has the potential of affecting the nationally-designated Feather Wild and Scenic River (MiddleFork). If this alternative is recommended, the NPS would expect a study be conducted.	As required by both NEPA and CEQA, DWR would assess impacts associated with alternatives that DWR is considering for implementation.
F-01-03	National Park Service, California Hydro Program November 16, 2001	NPS is comfortable with "Issue Statements" for Recreations and Socioeconomics. But they renew their concern about DWR's self-imposed obligation to tie them back to the "Resource Issues, Concerns and Comments" which were recorded in the initial public meeting and subsequent brainstorming sessions.	DWR has used the issues statements for recreation to develop studies that address stakeholder concerns and issues. DWR has developed the issue tracker in Appendix B to allow stakeholders to follow an issue through the ALP.
F-01-04	National Park Service, California Hydro Program November 16, 2001	Recreation resource issues are being adequately examined in the seventeen recreation study plans, which have been proposed.	Comment noted.

Comment Number	Source	Summary of Comment	Response
F-01-05	National Park Service, California Hydro Program November 16, 2001	NPS is perplexed regarding Issue S2 and how providing lower utility rates to the Oroville area applies to this relicensing proceeding given the contractual constraints of SWP.	DWR has investigated this issue in conjunction with Butte County Tax Payers Association, and determined that it is not practical due to feasibility, cost, and regulatory constraints.
F-01-06	National Park Service, California Hydro Program November 16, 2001	An analysis of the recreation and socio-economic effects of several upstream-projects are particularly important in this proceeding.	Study Plan SP-R5 will include an analysis of regional recreation supply and demand. The relicensing recreation studies for the upstream projects are included in Attachment A (the existing information) of this study. The relicensing collaborative may also consider issues associated with these facilities in their analysis of cumulative impacts.
F-01-07	National Park Service, California Hydro Program November 16, 2001	NPS feels that the consultants are doing an excellent job of producing study plans, keeping the Recreation & Socio-economic Work Group informed and responding effectively to their concerns.	Comment noted.
F-02-01	Plumas National Forest November 14, 2001	Desire to ensure that the operation and maintenance of Oroville Facilities are consistent with the National Forest Management Act and the Plumas National Forest Land and Resource Management Plan.	This issue is addressed in Study Plan SP-L3.
F-02-02	Plumas National Forest November 14, 2001	Forest Service expects the proposed studies will help identify and focus on appropriate stipulations from Section 4(e) of the Federal Power Act.	DWR and the Forest Service have continued to coordinate through the working groups on the development and implementation of study plans that would address potential 4(e) conditions.

Comment Number	Source	Summary of Comment	Response
F-02-03	Plumas National Forest November 14, 2001	Some of the Forest Plan Standards and Guidelines submitted to DWR on January 29, 2001 were modified or replaced and incorporated into the Sierra Nevada Forest Plan Amendment. While these changes have not been sent to you, it is unlikely that the updated Standards and Guidelines would result in alterations to Issue Statements appearing in the Draft SD1.	This issue is addressed in Study Plan SP-L3.
F-02-04	Plumas National Forest November 14, 2001	A listing of items the Forest Service wishes to have addressed during relicensing was submitted on Mar. 2, 2001. The Forest Service has participated in the formulation of Issue Statements and Study Plans.	These issues have been considered in the development of study plans and are tracked in Appendix B of the Final SD1.
F-02-05	Plumas National Forest November 14, 2001	Issue Statements from Draft SD1 considered most important to decision-making: 4.3 Water Quantity and Quality (W) W3, W5, and W7.	These issue statements are addressed in Study Plans SP-W1 through SP-W9.
F-02-06	Plumas National Forest November 14, 2001	Issue Statements from Draft SD1 considered most important to decision-making: 4.4 Fisheries Resources (F) F1, F4, F7, F8, and F13.	These issue statements are addressed in Study Plans SP-F3.1, SP-F8, and SP-F10.
F-02-07	Plumas National Forest November 14, 2001	Issue Statements from Draft SD1 considered most important to decision-making: 4.5 Terrestrial Resources (T) T1 through T11.	These issue statements are addressed in Study Plans SP-T1 through SP-T11.
F-02-08	Plumas National Forest November 14, 2001	Issue Statements from Draft SD1 considered most important to decision-making: 4.7 Cultural Resources (C) CR1 through CR4.	These issue statements are addressed in Study Plans SP-C1 through SP-C4.

Comment Number	Source	Summary of Comment	Response
F-02-09	Plumas National Forest November 14, 2001	Issue Statements from Draft SD1 considered most important to decision-making: 4.9 Land Use, Land Management and Aesthetic Resources (LU/LM/A) LU1 and LU2.	These issue statements are addressed in Study Plans SP-L1 and SP-L2.
F-02-10	Plumas National Forest November 14, 2001	Forest Service needs evaluation similar to that described in issue statements F13 and T2 for agency identified Sensitive Species for portions of the project located on or affecting National Forest System lands.	These issue statements are addressed in Study Plan SP-T2.

Comment Number	Source	Summary of Comment	Response
F-02-11	Plumas National Forest November 14, 2001	The relationship of the project to the Middle Fork Feather Wild and Scenic River needs to be studied. Does operation and maintenance of the project encroach on the area or unreasonably diminishes the scenic, recreational, and fish and wildlife values present in the area on the date of designation of the Middle Fork of the Feather River (October 2, 1968)?	<p>The Middle Fork Feather River above Lake Oroville was designated as Wild and Scenic in 1968. Current operations and maintenance practices do not encroach on the designated Wild and Scenic Reach of the river.</p> <p>Motorized boat access and encroachment on the Wild and Scenic Reach is currently precluded by a set of Class V rapids. However, structural changes to the main dam could raise reservoir levels, allowing motorized boat traffic into the Wild and Scenic Reach.</p> <p>Operational scenarios that would increase water levels are being evaluated by various flood protection studies independent of the relicensing process and any proposed changes that may result from those studies would have to undergo their own environmental documentation. It is anticipated that any operational changes related to flood protection that increase pool elevations would be infrequent and of short durations.</p> <p>DWR will continue to confer with the FS on alternative operations and implementation of PME measures that could affect the Middle Fork Feather Wild and Scenic River values.</p>

Comment Number	Source	Summary of Comment	Response
F-02-12	Plumas National Forest November 14, 2001	Request that the proposed action or one alternative include any mandatory conditions required by the Forest Service.	NEPA evaluation of FS 4(e) conditions requires that these conditions be determined during the development of alternatives. To comply with CEQA and NEPA, DWR is currently developing alternatives to the proposed action/proposed project. SD2 will include a description of alternatives that will be considered in the PDEA.
F-02-13	Plumas National Forest November 14, 2001	Scope of the studies should include the areas affected by the project, and not be limited by the project boundary. Results from studies can help refine analysis for draft EA.	The scope of study plans has been addressed for each study in the Work Group and Plenary Study Plan review process.
F-02-14	Plumas National Forest November 14, 2001	It is difficult at this stage in the project to identify issues that require less detailed analysis.	The level of effort for each study has been reviewed by the Work Groups and the Plenary Group.
F-03-01	National Marine Fisheries Service October 11, 2001	To determine a species needs, NMFS often looks to historical unimpaired flow conditions as a guide/reference for gauging the effects of a project on a species' ability to survive in the current ecosystem.	Study Plan SP-F10 will not address conditions before the dam was built; however recent trends in fisheries will be considered based on available data sources.
F-03-02	National Marine Fisheries Service October 11, 2001	The extent of the action area for the Oroville Project may change as new information, particularly on cumulative impacts, is generated through the relicensing process.	Section 5.1 of the Final SD1 provides the DWR approach for analysis of cumulative impacts.

Comment Number	Source	Summary of Comment	Response
F-03-03	National Marine Fisheries Service October 11, 2001	When FERC considers whether to re-license a hydropower project, it must review the project to ensure it is best adapted to a comprehensive plan for protection, mitigation and enhancement of fish and wildlife.	Comment noted.
F-03-04	National Marine Fisheries Service October 11, 2001	DWR must meet CEQ regulations to consider in a single EIS, "Indirect Effects," Cumulative Impacts," and "Connected Actions."	FERC will consider compliance with NEPA when issuing a new license for the project, including connected actions, indirect effects, and cumulative impacts. DWRs PDEA will assess the potential for project-related effects under a new license. DWR intends to comply with CEQ regulations.
F-03-05	National Marine Fisheries Service October 11, 2001	FERC should prepare an Environmental Impact Statement (EIS) for the federal action of relicensing the project.	FERC will determine whether an EIS or EA is appropriate for the relicensing project.
F-03-06	National Marine Fisheries Service October 11, 2001	All studies must be sufficient to fully describe impacts of the proposed hydroelectric project license and alternatives. Studies must include direct, indirect and cumulative impacts, extending downstream to the confluence with the ocean unless specific threshold analyses indicate otherwise.	The scope of studies has been considered in consultation with the NMFS during the Task Force, Work Group, and Plenary Group meetings for the study plans. A list of final study plans has been included in Appendix D.
F-03-07	National Marine Fisheries Service October 11, 2001	The licensee must conduct adequate studies to fully develop a range of alternatives for providing fish passage including plans for restoring access to historic habitats.	This issue is addressed in Study Plan F-15.

Comment Number	Source	Summary of Comment	Response
F-03-08	National Marine Fisheries Service October 11, 2001	As stated by FERC, environment affected is clearly not only within project boundaries. Mitigation for impacts on fish and wildlife must consider the project area and its vicinity.	The ALP has developed the scope and approach for each study plan.
G-01-01	California Business Properties Association No date	It is important that we maintain the water supplies that we currently have.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
G-01-02	California Business Properties Association No date	The CalFed solution recognizes the need for more water storage. Preventing the loss of water storage should be considered in the Oroville proceedings.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
G-01-03	California Business Properties Association No date	Relicensing process should not duplicate efforts of CalFed solution area, which encompasses the Feather River watershed.	Please see DWR's approach for CALFED coordination in Section 3.3 of Appendix E.
G-01-04	California Business Properties Association No date	This process must weigh its actions in light of their potential negative impacts on a high-quality water supply from Oroville to other areas of California.	DWR has developed eight study plans to address water quality impacts associated with the proposed project. Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
G-01-05	California Business Properties Association No date	California cannot afford to lose any more water due to regulatory fiat.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Response
G-02-01	California Chamber of Commerce October 29, 2001	Existing generation provided by Hyatt and Thermalito should be preserved.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
G-02-02	California Chamber of Commerce October 29, 2001	Allowing the Project to maintain electrical output will help keep the cost of water down.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
G-03-01	Association of California Water Agencies October 30, 2001	Significant impacts on California due to loss of water supply should be investigated in the relicensing of the Oroville Facilities.	See Sections 4.0 and 5.0 of the PPEA. Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
G-03-02	Association of California Water Agencies October 30, 2001	Project should retain the important water and power benefits the Facilities provide to the State.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
G-04-01	California ISO November 26, 2001	ISO controlled grid has ties to the hydroelectric pump-generators at Hyatt-Thermalito. Difficulties presently exist within the ISO controlled grid. The Complex helps the ISO manage these problems.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
G-04-02	California ISO November 26, 2001	The pump generation facilities at Oroville are important for generating capacity and reliability benefits to the ISO grid. (frequency regulation, voltage support, operating resource capacity, and supplemental energy)	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Response
G-05-01	Oroville Foundation of Flight October 29, 2001	Request for a year-round Seaplane base at the Afterbay waterway.	This proposal was considered as a potential interim project. However, additional information is needed to assess project feasibility.
G-06-01	Southern California Water Committee October 30, 2001	Southern California has already lost significant high quality water supplies in other regulatory processes. We cannot afford to further reduce supplemental water necessary to support Southern California's economy.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
G-06-02	Southern California Water Committee October 30, 2001	The relicensing process should maintain benefits currently received from the water stored at reservoir and continue to use Project-generated power to offset the water cost.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
G-07-01	Southern California Water Committee October 30, 2001	Southern California has already lost significant high quality water supplies in other regulatory processes. We cannot afford to further reduce supplemental water necessary to support Southern California's economy and population.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
G-07-02	Southern California Water Committee October 30, 2001	The relicensing process should maintain benefits currently received from the water stored at reservoir and continue to use Project-generated power to offset the water cost.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
G-08-01	Paleo Resource Consultants, F&F Geo Resource Associates, Inc November 26, 2001	Oroville Facilities relicensing environmental assessment should include: determine the nature, distribution, and value of paleontological resources within the Area of Potential Effects.	Data from Study Plans SP-G1 and SP-G2 will be used to address this issue.

Comment Number	Source	Summary of Comment	Response
G-08-02	Paleo Resource Consultants, F&F Geo Resource Associates, Inc November 26, 2001	Oroville Facilities relicensing environmental assessment should include: evaluate the need and methods to provide protection of paleontological resources within the APE.	Data from Study Plans SP-G1 and SP-G2 will be used to address this issue.
G-08-03	Paleo Resource Consultants, F&F Geo Resource Associates, Inc November 26, 2001	Oroville Facilities relicensing environmental assessment should include: determine the effects of existing and future project facilities, operations, and maintenance on paleontological resources within the APE.	Data from Study Plans SP-G1 and SP-G2 will be used to address this issue.
G-08-04	Paleo Resource Consultants, F&F Geo Resource Associates, Inc November 26, 2001	Oroville Facilities relicensing environmental assessment should include: provide for the interpretation of paleontological resources and make available paleontological resources data relative to the Oroville project area.	Data from Study Plans SP-G1 and SP-G2 will be used to address this issue.
G-08-05	Paleo Resource Consultants, F&F Geo Resource Associates, Inc November 26, 2001	Additional paleontological resource issues may need to be addressed once an initial survey of paleontological resources within the APE has been completed.	Data from Study Plans SP-G1 and SP-G2 will be used to address this issue.
G-09-01	Civil Engineering Services November 16, 2001	Concern involves the volume of traffic, which the Lake Oroville facilities generate and the routes by which users have access. A map of four routes and descriptions were included.	This issue is addressed in Study Plan SP-R14.

Comment Number	Source	Summary of Comment	Response
G-09-02	Civil Engineering Services November 16, 2001	Request that DWR study the aspect of access to the Project and coordinate with Caltrans and Butte County Public Works Departments to make best utilization of available routs for maximum reduction of impact on Highway 162.	This issue is addressed in Study Plan SP-R14.
G-09-03	Civil Engineering Services November 16, 2001	The relicensing effort should include thorough signing on all alternate routes and an organized effort to inform and encourage the visitors with their options for access.	This issue is addressed in Study Plan SP-R14.
S-01-01	State of California Electricity Oversight Board October 30, 2001	Underscores important electric contribution of the Facilities including ancillary services to maintain overall grid reliability.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
S-02-01	State Water Resources Control Board November 21, 2001	A NEPA/CEQA environmental document that adequately addresses the needs of the SWRCB is necessary to support any Section 401 Certification issued.	DWR has been coordinating with the SWRCB in the Working Groups to address resource concerns related to the Oroville Facilities. DWR will be coordinating with SWRCB on other CEQA/NEPA concerns that should be considered with an application for 401 Certification.
S-02-02	State Water Resources Control Board November 21, 2001	SWRCB staff recommends that all issues in Appendix B of Draft SD1 be addressed if the ALP collaborative team is to effectively analyze the effects of current project operation on attributes of the Feather River system and locale.	Appendix B of the Final SD1 has been reformatted in a manner that allows stakeholders and agency staff to track issues through the ALP.

Comment Number	Source	Summary of Comment	Response
S-02-03	State Water Resources Control Board November 21, 2001	The language in Draft SD1 is vague as to the approach that will be taken by DWR to meet Lead Agency requirements under CEQA. SD2 should clearly disclose how CEQA compliance will be met.	DWR will be coordinating with the SWRCB and FERC on the environmental review of the proposed project in compliance with CEQA and NEPA.
S-02-04	State Water Resources Control Board November 21, 2001	The collaborative team must remain aware that familiarity with the project and its effects on resources may generate additional resource concerns that need to be addressed later in this process.	The ALP has developed the scope and approach for each study plan.
S-02-05	State Water Resources Control Board November 21, 2001	The APEA and CEQA documents must provide data to support a conclusion that project features and operation are protective of the beneficial uses designated for project-affected waters.	The ALP has developed several study plans in consultation with the SWRCB to address collection of adequate data for evaluation of beneficial uses of the project waters. Study Plan SP-W1 will focus on this issue.
S-02-06	State Water Resources Control Board November 21, 2001	SD2 should fully disclose the Interim Measures philosophy, a list of recreation issues addressed, and the process that will be followed to select and incorporate them into NEPA and CEQA environmental filing package(s).	The Recreation Work Group developed a list of interim projects. These were addressed by the Plenary Group and forwarded to DWR for consideration. Please see interim project discussion for more detail in Section 3.2 of Appendix E.
S-02-07	State Water Resources Control Board November 21, 2001	Adequate data must be collected to support the SWRCB's evaluation of project effects on the designated beneficial uses of Lake Oroville and Feather River waters.	This issue is addressed in Study Plan SP-W1.

Comment Number	Source	Summary of Comment	Response
S-02-08	State Water Resources Control Board November 21, 2001	Water temperature studies should be designed to include a minimum of three years of thermographic data collection in attempt to provide representation of various water year types. Analysis should also include the potential management of cold- water releases from the dam's existing low-level outlet.	This issue is addressed in Study Plan SP-W6.
S-02-09	State Water Resources Control Board November 21, 2001	A feasibility study should be conducted to determine potential whitewater uses that could be achieved by utilizing natural or controlled flows upstream and downstream of the project features.	This issue is addressed in Study Plan SP-R16.
S-02-10	State Water Resources Control Board November 21, 2001	Information is needed to determine whether any of the proposed interim projects are actually outstanding responsibilities under the existing license.	DWR is in compliance with all license articles related to recreation. Please see discussion of interim projects and license conditions for more detail in Section 3.2 of Appendix E.
S-02-11	State Water Resources Control Board November 21, 2001	Inventories of OWA sensitive plant, amphibian, and avian species should be conducted and risk factors to individuals and populations determined for future management decisions.	This issue is addressed in Study Plans SP-T2 and SP-T4.
S-02-12	State Water Resources Control Board November 21, 2001	DWR should consider the benefits and trade-offs that would occur with the re-operation of the water delivery system through the Thermalito Afterbay. This would allow for the separate delivery of water for agricultural diversions and fisheries releases.	Study Plans SP-E7and SP-E8 will provide engineering and operations information to address this issue. The specific scenarios suggested by SWRCB will be considered as part of a suite of analyses performed in the study plans.

Comment Number	Source	Summary of Comment	Response
S-02-13	State Water Resources Control Board November 21, 2001	Studies should address all parameters of water quality as flow enters the project boundaries, passes through facility features, and discharges downstream.	This issue is addressed in Study Plan SP-W1.
S-02-14	State Water Resources Control Board November 21, 2001	The primary purpose of the Oroville project is to provide a supply of water for various municipalities and for irrigation, power generation is recognized as incidental use of project waters. The licensee must demonstrate that primary water uses can be satisfied in season and in magnitude prior to scheduling delivery of stored water for power generation.	As part of the SWP, Lake Oroville is used to impound water for water supply. Power production is a by-product of the water supply and regulatory operations.
S-02-15a	State Water Resources Control Board November 21, 2001	What are the potential impacts of fluctuation zone and surface elevation change on recreation opportunities?	This issue is addressed in Study Plans SP- E2 and SP-R3.
S-02-15b	State Water Resources Control Board November 21, 2001	What are the potential impacts of fluctuation zone and surface elevation change on fish habitat?	This issue is addressed in Study Plan SP-F3.1.
S-02-15c	State Water Resources Control Board November 21, 2001	What are the potential impacts of fluctuation zone and surface elevation change on wildlife habitat?	This issue is addressed in Study Plans SP-T1 and SP-T3/5

Comment Number	Source	Summary of Comment	Response
S-02-16	State Water Resources Control Board November 21, 2001	Proximity of project features and recreational facilities to shoreline and banks of water bodies offers potential for introduction of nutrients and bacterial contaminants to these waters. What are the water quality trends (including, but not limited to nitrogen, phosphorous and coliform bacteria levels) associated with project related activities?	This issue is addressed in Study Plans SP-W3 and SP-W7.
S-02-17	State Water Resources Control Board November 21, 2001	Lake Oroville, fed by tributaries that have a history of gold mining activity, has potential for accumulation of elemental mercury in it's basin sediments. Potential presence and uptake of methylmercury through the food chain must be assessed.	This issue is addressed in Study Plan SP-W2.
S-02-18	State Water Resources Control Board November 21, 2001	Both cold water and warm water habitat, spawning, and migration uses have been designated for surface waters potentially affected by the project. A determination must be made as to specific thermal habitat that may be reasonably provided in each water body within project boundaries and downstream of the project.	This issue is addressed in Study Plans SP-F3.1 and SP-F3.2. Study Plans SP-E1.3, SP-E1.5, SP-E6, SP-E7, and SP-E8 will provide engineering and operations information to address this issue.
S-02-19	State Water Resources Control Board November 21, 2001	Depth and capacity of the Oroville reservoir creates a thermally stratified condition. What is the cold-water pool retained in the basin and what is its availability for release in various water year types?	This issue is addressed in Study Plans SP-W1 and SP-W6. Study Plans SP-E1.3 and SP-E7 will provide engineering and operations information to address this issue.

Comment Number	Source	Summary of Comment	Response
S-02-20	State Water Resources Control Board November 21, 2001	Thermalito Afterbay acts as a thermal retention basin for project water prior to delivery to water districts outside the project boundary. How do releases from Thermalito Afterbay affect the stream temperature and dissolved oxygen content of Feather River receiving waters?	This issue is addressed in Study Plans SP-W1 and SP-W6.
S-02-21	State Water Resources Control Board November 21, 2001	The Feather River's low-flow reach has historically provided spawning habitat for cold water fishery. How have reduced flows to the Feather River's low-flow reach affected water temperature and gravel substrate necessary for successful salmonid reproduction?	This issue is addressed in Study Plans SP-F10, and SP-G2.
S-02-22	State Water Resources Control Board November 21, 2001	Project features and operations alter the hydrology of the system, creating the possibility for scour zones within both natural and designed channels. What affects do discharge and ramping rates have on substrate scour and the mobilization of sediments into the water column downstream? How have turbidity levels been affected by project operation?	This issue is addressed in Study Plans SP-G2 and SP-W1.
S-02-23	State Water Resources Control Board November 21, 2001	Alterations in stream hydrology affect the natural fluvial geomorphologic processes of a riverine system. How has the change in magnitude, frequency and timing of peak flows on the Feather River affected riparian vegetation recruitment in the low-flow reach and immediately downstream of Afterbay?	This issue is addressed in Study Plan SP-T3/5.

Comment Number	Source	Summary of Comment	Response
S-02-24	State Water Resources Control Board November 21, 2001	Various recreational and public use facilities were designated as mitigation measures to minimize impacts resulting from the original Oroville project construction. The licensee should provide a complete inventory of recreational mitigation obligations required by Articles of the existing FERC license, and should clearly disclose the current status of compliance with those measures.	DWR is in compliance with the existing license. Please see the discussion on existing license conditions in Section 3.1 of Appendix E.
S-03-01	California Department of Fish & Game November 21, 2001	One Department of Fish and Game relicensing issue that appears to have been lost is the concern for funding of the OWA.	This issue is included in issue statement LM1 in this document. This issue is addressed in Study Plans SP-T6, SP-R4, and SP-L2.
S-03-02	California Department of Fish & Game November 21, 2001	Department of Fish and Game requests that the Oroville Facilities ALP address the need for additional funding for operation of the OWA.	This issue is addressed in Study Plans SP-T6, SP-R4, and SP-L2.
S-03-03	California Department of Fish & Game November 21, 2001	(Pg v & Pg 1-Draft SD1) The Final Scoping Document should define the term "facility" refers to just the hydropower operation or the entire Complex.	"Oroville Facilities" is defined in the footnote of the executive summary and introduction of the Draft and Final SD1.
S-03-04	California Department of Fish & Game November 21, 2001	(Pg 3-Draft SD1) Highway 99 between Yuba City and Chico is labeled Highway 70.	Figure 1 has been revised.
S-03-05	California Department of Fish & Game November 21, 2001	(Pg 5-Draft SD1)The ALP process offers the public more that three formal comment opportunities which will also occur after the SD2 is published and during the SWRCB 401 certification process.	The ALP offers three formal opportunities for the public to provide comments to DWR. The 401 certification process is outside the ALP.

Comment Number	Source	Summary of Comment	Response
S-03-06	California Department of Fish & Game November 21, 2001	(Pg 20-Draft SD1) DWR should not eliminate "project retirement or issuance of a non-power license" from range of alternatives. FERC "Guidelines for Preparing Environmental Assessments" provides detailed information on evaluating project retirement as a licensing alternative.	To comply with CEQA and NEPA, DWR is currently developing alternatives to the proposed action/proposed project. SD2 will include a description of alternatives that will be considered in the PDEA.
S-03-07	California Department of Fish & Game November 21, 2001	(Resource Issues-Appendix B-Draft SD1) DWR should also investigate fish screens and other facilities that provide downstream passage.	This issue is addressed in Study Plan SP-F15.
S-03-08	California Department of Fish & Game November 21, 2001	DWR should consider alternatives that would allow cooler waters from Lake Oroville to be directed to the low-flow channel while warmer waters are directed to the Thermalito Forebay.	The ALP will consider alternative methods for meeting temperature requirements with the completion of Study Plans SP-E6 and SP-E7.
S-03a-01	California Department of Fish & Game February 16, 2001	Are the project related Lake Oroville water level fluctuations presently affecting the reproduction and survival of warm-water sportfish?	This issue is addressed in Study Plan SP-F3.1.
S-03a-02	California Department of Fish & Game February 16, 2001	Will project related Lake Oroville water fluctuations affect the reproduction and survival of warm-water sportfish under future operational demands?	Future operational demands are included in the model assumptions for Study Plan SP-E2. The reservoir stage data from the modeling process will include future water demand and will form the basis for analysis in Study Plan SP-F3.1, which addresses this issue.

Comment Number	Source	Summary of Comment	Response
S-03a-03	California Department of Fish & Game February 16, 2001	Is the present minimum pool adequate for protecting the Lake Oroville cold-water sport fishery.	This issue is addressed in Study Plan SP-F 3.1. Study Plan SP-E7 will provide engineering and operations information to address this issue.
S-03a-04a	California Department of Fish & Game February 16, 2001	Are the existing temperature requirements defined under SWP Feather River Flow Constraints, being met?	DWR has and continues to operate the Oroville Facilities to meet all applicable operational constraints. These include temperature objectives contained in the 1983 agreement between DWR and DFG as well as the objectives contained in the 2001 NMFS biological opinion for spring run Chinook and Steelhead.
S-03a-04b	California Department of Fish & Game February 16, 2001	Are steelhead adequately protected and fall, late-fall, and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay outlet?	This issue addressed in Study Plan SP-F10.
S-03a-05	California Department of Fish & Game February 16, 2001	Is the availability of a cold-water pool in Lake Oroville adequate under present and future operational demands to meet the existing downstream present and future operational demands to cold freshwater habitat requirements of steelhead and fall, late-fall and spring-run Chinook salmon?	This issue is addressed in Study Plan SP-F3.1. Study Plan SP-E7 will provide engineering and operations information to address this issue.
S-03a-06	California Department of Fish & Game February 16, 2001	Are the existing temperature requirements defined under the SWP's Feather River Flow Constraints adequate for the operation of the Feather River Hatchery?	This issue is addressed in Study Plans SP-F9 and SP-W6.

Comment Number	Source	Summary of Comment	Response
S-03a-07	California Department of Fish & Game February 16, 2001	Is the availability of a cold-water pool in Lake Oroville adequate under present and future operational demands to meet SWP cold-water requirements for Feather River Flow Constraints for the Feather River Hatchery.	The hatchery uses a “chiller” if reservoir temperatures are not adequate. Therefore no additional study is warranted.
S-03a-08	California Department of Fish & Game February 16, 2001	Does the existing Temperature Control Device in Lake Oroville provide adequate access to the cold water pool during below normal water or drier years?	Study Plan SP-E7 will provide engineering and operations information to address this issue.
S-03a-9	California Department of Fish & Game February 16, 2001	Will the existing Temperature Control Device in Lake Oroville providing adequate access to the cold-water pool under future operational demands particularly during a series of dry and critically dry years?	Study Plan SP-E7 will provide engineering and operations information to address this issue.
S-03a-10	California Department of Fish & Game February 16, 2001	Does the present temperature model have the ability to forecast average daily water temperatures, under present and future operational demands, in the low-flow channel and in the river from the Thermalito Afterbay outlet to Verona?	Study Plans SP-E2 and SP-E1.5 will provide engineering and operations information to address this issue.
S-03a-11	California Department of Fish & Game February 16, 2001	How does the Feather River Hatchery requirement for warm water in the summer impact river water temperatures required for holding or rearing of steelhead and spring-run Chinook salmon in the low-flow section?	This issue is addressed in Study Plan SP-F10. Study Plan SP-E1.2 will provide engineering and operations information to address this issue.

Comment Number	Source	Summary of Comment	Response
S-03a-12	California Department of Fish & Game February 16, 2001	How does the pump-back operation during the summer months affect water temperatures required for holding and rearing of steelhead and spring-run Chinook salmon in the low-flow section and river downstream of Thermalito Afterbay?	This issue is addressed in Study Plan SP-F10. Study Plans SP-E1.4 and SP-E8 will provide engineering and operations information to address this issue.
S-03a-13	California Department of Fish & Game February 16, 2001	Do increases in river temperature from warmer Thermalito Afterbay releases during spring, summer & fall months limit suitable steelhead and salmon habitat downstream of Thermalito Afterbay?	This issue is addressed in Study Plan SP-F10. Study Plans SP-E1.5 and SP-E6 will provide engineering and operations information to address this issue.
S-03a-14	California Department of Fish & Game February 16, 2001	Do increases in river temperature from warmer Thermalito Afterbay releases during spring, summer & fall months affect survival of salmonid species outmigrating from the Yuba River?	This issue is addressed in Study Plan SP-F10. Study Plan SP-E1.5 and SP-E6 will provide engineering and operations information to address this issue.
S-03a-15	California Department of Fish & Game February 16, 2001	Are Dissolved Oxygen levels in the Feather River from Thermalito Afterbay to Live Oak a problem during spring, summer and fall months?	This issue is addressed in Study Plan SP-W1. Study Plan SP-E1.3 will provide engineering and operations information to address this issue.
S-03a-16	California Department of Fish & Game February 16, 2001	Are the present stream flows defined under SWP's Feather River Flow Constraints being met and adequately protecting steelhead and fall, late-fall, and spring-run Chinook salmon in the low-flow section and river downstream of Thermalito Afterbay?	This issue is addressed in Study Plan SP-F10.

Comment Number	Source	Summary of Comment	Response
S-03a-17	California Department of Fish & Game February 16, 2001	Is additional PHABSIM necessary to determine stream flows for spawning and rearing steelhead & fall, late-fall and spring-run Chinook salmon in the low-flow section and river downstream of Thermalito Afterbay?	This issue is addressed in Study Plan SP-F16.
S-03a-18	California Department of Fish & Game February 16, 2001	Is riparian vegetative cover in the low-flow section and downstream of Thermalito Afterbay adequate under present flow conditions for rearing steelhead and fall, late-fall, and spring-run Chinook salmon?	This issue is addressed in Study Plans SP-F16 and SP-T3/5.
S-03a-19	California Department of Fish & Game February 16, 2001	Are the present flow requirements defined under SWP's Feather River Flow Constraints adequate for maintaining natural fluvial river functions in the low-flow section and downstream of Thermalito Afterbay?	This issue is addressed in Study Plan SP-G2.
S-03a-20	California Department of Fish & Game, February 16, 2001	Under existing conditions, does the diversity and abundance of benthic macroinvertebrates in the low-flow section and downstream of Thermalito Afterbay suggest a healthy stream channel?	This issue is addressed in Study Plan SP-F1.
S-03a-21	California Department of Fish & Game February 16, 2001	Under existing conditions, are there adequate amounts of suitable gravel for salmonid spawning in the low-flow section and downstream of Thermalito Afterbay?	This issue is addressed in Study Plan SP-F10.

Comment Number	Source	Summary of Comment	Response
S-03a-22	California Department of Fish & Game February 16, 2001	Under existing conditions, are bankful flows frequent enough to maintain channel morphology, sediment transport, habitat diversity and adequate gravels for salmonid spawning and rearing in the low-flow section and downstream of Thermalito Afterbay?	This issue is addressed in Study Plans SP-F10 and SP-G2.
S-03a-23	California Department of Fish & Game February 16, 2001	Under existing conditions, are moderate winter floods and bankful flows adequately recruiting large woody debris needed to maintain adequate salmonid rearing habitat in the low-flow section and downstream of Thermalito Afterbay?	This issue is addressed in Study Plans SP-G1 and SP-G2.
S-03a-24	California Department of Fish & Game February 16, 2001	How will future demand for project water change timing and duration of moderate winter floods and bankful flows in the low-flow section and downstream of Thermalito Afterbay?	Study Plan SP-E1.1 will provide engineering and operations information to address this issue. The modeling program CALSIM is being run with year 2020 demand.
S-03a-25	California Department of Fish & Game February 16, 2001	Are the present project ramping/fluctuation restraints adequately protecting rearing salmonid species from being stranded in the low-flow section and downstream of Thermalito Afterbay?	This issue is addressed in Study Plan SP-F16.
S-03a-26	California Department of Fish & Game February 16, 2001	Are the present project ramping/fluctuation restraints adequately protecting salmonid redds and spawning gravel from being scoured out from the low-flow section and downstream of Thermalito Afterbay?	This issue is addressed in Study Plan SP-F16.

Comment Number	Source	Summary of Comment	Response
S-03a-27	California Department of Fish & Game February 16, 2001	Are engineering or other solutions available to prevent the interbreeding of fall and spring-run Chinook salmon in the low-flow section of the Feather River?	This issue is addressed in Study Plan SP-F9.
S-03a-28	California Department of Fish & Game February 16, 2001	Would fish screens on the pump-back operation prevent Infectious Hemopatic Necrosis (IHN) and other diseases specific to salmonid species from spreading and becoming permanently established in Lake Oroville?	The fish disease issue is addressed in Study Plan SP-F2.
S-03a-29	California Department of Fish & Game February 16, 2001	Are additional funds needed to augment the existing budget at the OWA? Presently available Fish and Game funds are being dedicated to managing people and not wildlife habitat.	This issue is addressed in Study Plans SP-L2, SP-R4, and SP-T6.
S-03a-30	California Department of Fish & Game February 16, 2001	Are additional funds needed for law enforcement at the OWA? Additional funding for more wardens would free up time for other law enforcement activities outside of the OWA.	This issue is addressed in Study Plans SP-L2, SP-R2, and SP-T6.
S-03a-31	California Department of Fish & Game February 16, 2001	Have surveys been completed to determine what State of federally listed species (plant & animal) are potentially being impacted by project operations?	This issue is addressed in Study Plan SP-T2.

Comment Number	Source	Summary of Comment	Response
S-03a-32	California Department of Fish & Game February 16, 2001	Has DWR completed or met its obligations for recreation mitigation (wildlife habitat & fishing) under the existing FERC license?	DWR is in compliance with the FERC license conditions. Please see DWR discussion of the existing license conditions in Section 3.1 of Appendix E.
S-03b-01	California Department of Fish & Game July 2, 2001	Department of Fish and Game submitted OWA budgetary needs at the February 28, 2001 Plenary Meeting with a request for review by the Recreation and Socioeconomic Work Group's Task Force.	This issue is included in issue statement LM1 of Section 4.0 of this document. This issue is addressed in Study Plan SP-T6, SP-R4, and SP-L2. The interim project "Wildlife Technical and Warden Funding" was grouped by the Task Force as a potential phase II interim project. These phase II projects will benefit from information collected during relicensing studies.
S-03b-02	California Department of Fish & Game July 2, 2001	The operation and maintenance of the OWA has been a concern at all the work groups, especially the Environmental and Recreational groups. The biggest concerns include public safety, wildlife habitat, cleanliness, and if Fish & Game is fulfilling the mitigation and/or mandates of the original license.	The wildlife habitat issue is addressed in Study Plans SP-T1. Operation of the OWA is addressed in Study Plans SP-T6 and SP-T9. The recreational use of the OWA is addressed in Study Plans SP-R4, SP-R5, and SP-R11. Please see DWR discussion of the existing license conditions in Section 3.1 of Appendix E.
S-03b-03	California Department of Fish & Game July 2, 2001	Department of Fish and Game requests additional funding for the OWA.	This issue is addressed in Study Plans SP-T6, SP-R4, and SP-L2.
W-01-01	State Water Contractors October 30, 2001	Retaining or enhancing the current water supply and power generation from the Oroville Facility is essential for maintaining a reliable and affordable water supply for California.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Response
W-01-02	State Water Contractors October 30, 2001	Operational changes that reduce the power generation capability and flexibility will result in increased water costs.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
W-01-03	State Water Contractors October 30, 2001	Loss of generation at Oroville will require SWP to purchase replacement energy thus increasing cost of water and imposes additional demand on scarce electric energy supply.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
W-01-04	State Water Contractors October 30, 2001	Concerned that operational changes will diminish the water supply available to SWP. California is on the verge of a water supply crisis that may well dwarf California's current energy crisis.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
W-01-05	State Water Contractors October 30, 2001	Relicensing the project should not duplicate efforts on environmental and flood management issues nor of the CalFed, Central Valley Project Improvement Act and other ecosystem restoration initiatives.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-01-06	State Water Contractors October 30, 2001	The environmental and flood management studies need to be tightly and strictly focused within the project boundary.	The scope of study plans has been addressed for each study in the Work Group and Plenary study plan review process.
W-01-07	State Water Contractors October 30, 2001	Any options considered in relicensing the project must be complementary to the CALFED program and the Sacramento and San Joaquin Basins comprehensive Study.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.

Comment Number	Source	Summary of Comment	Response
W-01-08	State Water Contractors October 30, 2001	Any options considered in relicensing the project should not result in additional losses of SWP water supplies.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
W-01-9	State Water Contractors October 30, 2001	Maintaining or increasing the flexibility in releases is required to continue the beneficial use of the project for providing reliable operation of the SWP and the power grid.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
W-02-01	Kern County Water Agency October 30, 2001	Retaining or enhancing the current water and power generation from the Oroville Facilities is essential for maintaining a reliable and affordable water supply for California.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
W-02-02	Kern County Water Agency October 30, 2001	Operational changes that reduce the power generation capability and flexibility will result in increased water costs to the Agency.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
W-02-03	Kern County Water Agency October 30, 2001	Concerned that operational changes will limit the water supply available.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
W-02-04	Kern County Water Agency October 30, 2001	Relicensing the project should not duplicate efforts of CalFed, Central Valley Project Improvement Act, and other ecosystem restoration initiatives.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.

Comment Number	Source	Summary of Comment	Response
W-02-05	Kern County Water Agency October 30, 2001	The environmental studies need to be tightly and strictly focused within the project boundary.	The scope of study plans has been addressed for each study in the Work Group and Plenary study plan review process.
W-02-06	Kern County Water Agency October 30, 2001	Environmental studies considered in the Project relicensing must be complementary to the CALFED program and not result in losses to SWP water supplies.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-02-07	Kern County Water Agency October 30, 2001	Maintaining or increasing the flexibility in releases is required to continue the beneficial use of the project for providing reliable operation of the power grid.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
W-03-01	Alameda County Flood Control & Water Conservation District October 30, 2001	Retaining or enhancing the current water and power generation from the Oroville Facilities is essential for maintaining a reliable and affordable water supply for California.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
W-03-02	Alameda County Flood Control & Water Conservation District October 30, 2001	Concerned with operational changes that might result in reducing the power generation capability and flexibility.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
W-03-03	Alameda County Flood Control & Water Conservation District October 30, 2001	Concerned with the operational changes that will erode water supply available to the SWP.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Response
W-03-04	Alameda County Flood Control & Water Conservation District October 30, 2001	Relicensing the project should not duplicate efforts of CalFed, and the Central Valley Project Improvement Act and other ecosystem restoration initiatives.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-03-05	Alameda County Flood Control & Water Conservation District October 30, 2001	The environmental studies need to be tightly and strictly focused within the project boundary.	The scope of study plans has been addressed for each study in the Work Group and Plenary study plan review process.
W-03-06	Alameda County Flood Control & Water Conservation District October 30, 2001	Environmental studies considered in relicensing the Project must be complementary to the CALFED program and not result in losses to SWP water supplies.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-03-07	Alameda County Flood Control & Water Conservation District October 30, 2001	Maintaining or increasing the flexibility in releases is required to continue the beneficial use of the project for providing reliable operation of the power grid.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
W-03-08	Alameda County Flood Control & Water Conservation District October 30, 2001	The relicensing process should seek innovative and creative solutions to meet the environmental, recreational and flood management needs in balance with maintaining power resources and water supply.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible. The ALP provides a forum for review of the issues and concerns throughout the relicensing process. This is the forum to discuss a balance of resource benefits.
W-04-01	Castaic Lake Water Agency October 30, 2001	Retaining or enhancing the current water and power generation from the Oroville Facilities is essential for maintaining a reliable and affordable water supply for California.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Response
W-04-02	Castaic Lake Water Agency October 30, 2001	Operational changes that reduce the power generation will result in increased costs to SWP contractors.	Throughout the relicensing process, DWR will focus on retaining the water / power supply values and benefits of the Oroville Facilities to the extent possible.
W-04-03	Castaic Lake Water Agency October 30, 2001	Concerned that operational changes will limit the water supply available.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
W-04-04	Castaic Lake Water Agency October 30, 2001	Relicensing the project should not duplicate efforts of CalFed, Central Valley Project Improvement Act and other ecosystem restoration initiatives.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-04-05	Castaic Lake Water Agency October 30, 2001	The environmental studies need to be tightly and strictly focused within the project boundary.	The scope of study plans has been addressed for each study in the Work Group and Plenary study plan review process.
W-04-06	Castaic Lake Water Agency October 30, 2001	Environmental studies should be complementary to CALFED and not result in losses of SWP water supplies.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of this appendix.
W-04-07	Castaic Lake Water Agency October 30, 2001	Maintaining or increasing the flexibility in releases is required to continue the beneficial use of the project for providing reliable operation of the power grid.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Response
W-04-08	Castaic Lake Water Agency October 30, 2001	The relicensing process should seek innovative and creative solutions to meet the environmental, recreational and flood management needs in balance with maintaining power resources and water supply.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible. The ALP provides a forum for review of the issues and concerns throughout the relicensing process. This is the forum to discuss a balance of resource benefits.
W-05-01	Metropolitan Water District of Southern California November 26, 2001	Oroville Facilities' importance to California's water and power supply can't be overstated. DWR should act as a good steward and safeguard those benefits.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
W-05-02	Metropolitan Water District of Southern California November 26, 2001	Preservation of flood control, recreation and fish and wildlife objectives provided by the Facilities are also important.	The ALP has developed studies to address flood control (SP-E4), recreation (SP- R1 thru R19), fish and wildlife (SP-F1 through SP-F21 and SP-T1 through SP-T11).
W-05-03	Metropolitan Water District of Southern California November 26, 2001	There should be balanced decision-making regarding the resources and objectives and without compromising their associated existing benefits.	The ALP provides a forum for review of the issues and concerns throughout the relicensing process. This is the forum to discuss a balance of resource benefits.
W-05-04	Metropolitan Water District of Southern California November 26, 2001	The SWP is primarily operated to produce energy for the grid during on peak hours and to consume energy during off peak hours. This method of operation has provided enormous benefits to CA energy consumers during the recent energy crisis by keeping peak energy consumption down and the lights in homes, factories and businesses on.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Response
W-05-05	Metropolitan Water District of Southern California November 26, 2001	It is critical the FERC relicensing respect the CALFED Bay-Delta Program, which for nearly seven years has been developing a comprehensive program now in implementation-for managing the entire Bay-Delta watershed for environmental and economic purposes.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-05-06	Metropolitan Water District of Southern California November 26, 2001	MWD strongly believes that it would be highly inappropriate for the relicensing process to second-guess the measures and level of protection for the environment developed through the extensive public process of CALFED's developed, far-reaching plan for environmental protection and restoration in the Bay-Delta watershed.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-05-07	Metropolitan Water District of Southern California November 26, 2001	The CALFED process has strongly emphasized development of local resources and other innovative management approaches to meet growing demands for water in California. Nowhere has this mandate been more fully implemented than in Southern California.	Comment noted.
W-05-08	Metropolitan Water District of Southern California November 26, 2001	While the reliability of existing SWP supplies is critical for the regional economy, additional supplies from Oroville are not part of MWD plans to meet Southern California's future water supply needs.	Comment noted.

Comment Number	Source	Summary of Comment	Response
W-06-01	Santa Clara Valley Water District November 26, 2001	Reliability of District's water supply should be maintained or enhanced. SWP water is important for meeting the District's objectives for water source availability, water quantity, and water quality.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
W-06-02	Santa Clara Valley Water District November 26, 2001	Concern for power supply from Oroville Facilities needed to supply SWP water and the negative economic effects a reduced power supply could have.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
W-06-03	Santa Clara Valley Water District November 26, 2001	Concerned that all of the District's comments on the Plenary review of Draft NEPA SD1 and CEQA Notice of Preparation were not included in the Draft SD1 and Notice of Preparation. Request that DWR address earlier comments.	DWR has reviewed all of the comments received on the administrative review of the Draft SD1 and addressed those issues where possible in the revision of the document. The Draft SD1 was released after Plenary Group review and consensus. Some issues require modification to the ALP and could not be addressed in the Final SD1.
W-06-04	Santa Clara Valley Water District November 26, 2001	The District agrees with and incorporates the SWC comments (to their letter) on the September 27, 2001 draft NEPA SD1 and CEQA Notice of Preparation.	DWR has reviewed the SWC comments received on the Draft SD1 and provided responses to those comments in this appendix and the revised text of the Final SD1. Some issues require modification to the ALP and could not be addressed in the Final SD1.

Comment Number	Source	Summary of Comment	Response
W-07-01	State Water Contractors November 26, 2001	Not all SWC comments from the Plenary review of Draft SD1 were incorporated in September 27, 2001 revision of the Draft SD1. Please reconsider comments.	DWR has reviewed all of the comments received on the administrative review of the Draft SD1 and addressed those issues where possible in the revision of the document. The Draft SD1 was released after Plenary Group review and consensus. Some issues require modification to the ALP and could not be addressed in the Final SD1.
W-07-02	State Water Contractors November 26, 2001	Concerned that DWR did not include its relicensing objectives and goals for each resource area in the Sept. 27 revision the Draft SD1.	Throughout the relicensing process, DWR will focus on retaining the water supply / power values and benefits of the Oroville Facilities to the extent possible.
W-07-03	State Water Contractors November 26, 2001	Suggests that two documents that provide criteria for evaluating the need for proposed studies be included in an appendix of the Final SD1. Further suggests that DWR review the evaluation criteria with the Plenary Group and include criteria in the Final SD1.	The merits of each study plan have been considered in the ALP, within the Work Group and Plenary Group. DWR is now in the process of implementing the study plans.
W-07-04	State Water Contractors November 26, 2001	Suggests amending language in Section 3.1.3, p. 20 to clarify what is implicit therein so that it accords with NEPA practice. Revised language is proposed. Further, the SWC also agrees with the discussion in Section 3.2, that alternatives of project retirement or issuance of a non-power license can be eliminated from further consideration.	To comply with CEQA and NEPA, DWR is currently developing alternatives to the proposed action/proposed project. SD2 will include a description of alternatives that will be considered in the PDEA.
W-07-05	State Water Contractors November 26, 2001	Section 5.1 of the Draft SD1 should provide more guidance on the proper scope of the cumulative effects analysis.	An approach has been developed for the evaluation of cumulative impacts. Please consult section 5.1 of the Final SD1.

Comment Number	Source	Summary of Comment	Response
W-07-06	State Water Contractors November 26, 2001	Determining the geographic scope of the cumulative effect analysis should be done only after cumulative effects pathways and cause-effect relationships have been analyzed and specific cumulative effects issues identified.	An approach has been developed for the evaluation of cumulative impacts. Please consult section 5.1 of the Final SD1.
W-07-07	State Water Contractors November 26, 2001	Concern that practical limits must be established regarding the geographic area in which cumulative impacts of the proposed action are likely to occur.	Comment noted.
W-07-08	State Water Contractors November 26, 2001	Studies by other agencies and from other proceedings should be utilized in analyzing cumulative effects instead of conducting new studies.	Comment noted.
W-07-09	State Water Contractors November 26, 2001	FERC has the ability to reserve the right to revisit cumulative impacts and conduct studies after the license has been issued if there is a concern that an important cumulative effect has been overlooked.	An approach has been developed for the evaluation of cumulative impacts. Please consult section 5.1 of the Final SD1.
W-07-10	State Water Contractors November 26, 2001	Relicensing of the Oroville Facilities would not result in the creation of new water supplies, therefore an extensive analysis of urban and agricultural growth-inducing impacts is not warranted. This scope should be limited.	The DWR agrees with the assumption that relicensing will not result in an increase of water supply for the SWP beyond what is currently available. This assertion can be tested by analyzing operational model results.

Comment Number	Source	Summary of Comment	Response
W-07-11	State Water Contractors November 26, 2001	SWC agrees with discussion in Section 2.4, p. 15 of the Draft SD1 but believes it should identify and expand on important reasons why Oroville relicensing and the CALFED Program should be coordinated.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-07-12	State Water Contractors November 26, 2001	The CALFED Program constitutes a comprehensive plan and should be included in the comprehensive plan analysis.	Study Plan SP-L3 will consider the CALFED Program for consistency with comprehensive planning.
W-07-13	State Water Contractors November 26, 2001	The analysis of cumulative effects in the Oroville PDEA must include the beneficial impacts of environmental restoration projects developed through the CALFED Program.	An approach has been developed for the evaluation of cumulative impacts. Please consult Section 5.1 of the Final SD1.
W-07-14	State Water Contractors November 26, 2001	CALFED studies of cumulative effects should be fully utilized and not duplicated. CALFED studies proposed and underway should be listed in Appendix D to the SD.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-07-15	State Water Contractors November 26, 2001	Participation with the CALFED process would allow for interactions with agencies or actors that are not engaged in the Oroville relicensing.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-07-16	State Water Contractors November 26, 2001	Coordination of the Oroville relicensing process with the CALFED Program would address in one process, a comprehensive solution rather than pursue particular objectives in collateral proceedings outside the CALFED process.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.

Comment Number	Source	Summary of Comment	Response
W-07-17	State Water Contractors November 26, 2001	The Final SD1 needs to explain how NEPA scoping for the Oroville relicensing will be coordinated with the CALFED Program.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-07-18	State Water Contractors November 26, 2001	SWC recommends that a work group be established to institutionalize the coordination and liaison function with the CALFED Program.	Oroville Facilities relicensing activities will be internally coordinated by DWR staff. An additional Work Group is not required.
W-07-19	State Water Contractors November 26, 2001	The SD should provide an expanded explanation of how coordination with other comprehensive proceedings will occur. DWR should include an extensive list of studies with direct ties to the Oroville Project that are currently underway with other agencies.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
W-07-20	State Water Contractors November 26, 2001	DWR and its consultants should focus on the importance of grouping studies by function and assigning critical path status to the studies that must move forward to timely collect vital field info in early 2002.	Critical path Study Plans are identified in Appendix D. These were identified based on Study Plan function.
W-07-21	State Water Contractors November 26, 2001	SWC requests that Appendix D (Plenary review of Draft SD1) is changed to convey the same info contained in Section 3.1.2, p. 20, "The licensee is currently conducting studies that focus on water quality and aquatic resources... These studies are summarized in Appendix D."	Appendix D of the Draft SD1 has been re-titled Appendix C. The title of this appendix conveys that these studies are not a part of the ALP, but may provide data for consideration by the ALP.

Comment Number	Source	Summary of Comment	Response
W-07-22	State Water Contractors November 26, 2001	Flood control alternative (4th bullet) in Section 3.1.2 should be deleted because it does not provide a good example of a preferred alternative in the Oroville relicensing process.	To comply with CEQA and NEPA, DWR is currently developing alternatives to the proposed action/proposed project. SD2 will include a description of alternatives that will be considered in the PDEA.
W-07-23	State Water Contractors November 26, 2001	With respect to the 1st paragraph of Appendix C, it would be more appropriate to use the comments to refine the study plans rather than to refine the issue statements.	Appendix B and C of the Draft SD1 have been combined in Appendix B of the Final SD1. Appendix B “the issue tracker” tracks the disposition of comments, concerns, and issues in the ALP process.
W-08-01	Feather River Diverters (Joint Water Districts and Western Canal Water District September, 29, 2001 - Attachment	Concerns with low water temperature from the Thermalito Afterbay resulting in crop damage. Requests a license provision regarding suitable water temperature during certain periods.	Study Plan SP-E2 will provide engineering and operations information to address this issue. Water temperatures for agricultural purposes will be evaluated in the PDEA.
W-08-02	Feather River Diverters (Joint Water Districts and Western Canal Water District September, 29, 2001 - Attachment	Concerns with low water temperature from the Thermalito Afterbay resulting in crop damage. Requests a license provision regarding water temperature during certain periods.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
W-08-03	Feather River Diverters (Joint Water Districts and Western Canal Water District September, 29, 2001 - Attachment	NMFS recommendations for meeting water temperatures for fisheries in the Feather River would result in adverse temperature conditions for agricultural irrigation water and conflict with the 1969 water rights settlement.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
W-08-04	Feather River Diverters (Joint Water Districts and Western Canal Water District September, 29, 2001 – Attachment (Mattson)	Information on crop production with water obtained from the Oroville Facilities.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.

Comment Number	Source	Summary of Comment	Response
W-08-05	Feather River Diverters (Joint Water Districts and Western Canal Water District) September, 29, 2001 – Attachment (Adams)	Information on crop production with water obtained from the Oroville Facilities.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
W-08-06	Feather River Diverters (Joint Water Districts and Western Canal Water District) September, 29, 2001 – Attachment (LaMalfa)	Information on crop production with water obtained from the Oroville Facilities.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
W-08-07	Feather River Diverters (Joint Water Districts and Western Canal Water District) September, 29, 2001 – Attachment (Sligar)	Information on crop production with water obtained from the Oroville Facilities.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
W-08-08	Feather River Diverters (Joint Water Districts and Western Canal Water District) September, 29, 2001 – Attachment (Job)	Information on crop production with water obtained from the Oroville Facilities.	Study Plan SP-E2 will provide engineering and operations information to address this issue.
W-08-09	Feather River Diverters (Joint Water Districts and Western Canal Water District) September, 29, 2001 – Attachment	Historical account of cold water issues at the Oroville Facilities.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.

APPENDIX E, ATTACHMENT 1

Summary of Comments from the Public Meetings and DWR Responses

Comment Number	Source	Summary of Comment	Final Response
M1-01-01	Robert Fehlman – Western Canal Water District Doak Cotter - Joint Water Districts	Would like to see the ALP address concerns for irrigation water temperatures	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
M1-01-02	Robert Fehlman – Western Canal Water District Doak Cotter - Joint Water Districts	Water temperature affect on plants: Below 50° F– Plants Die; 50-55° F– Low germination activity; 55-60° F– Low Yield and seedling production	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
M1-01-03	Robert Fehlman and Doak Cotter Joint Water Districts	Not recommended to plant rice when combined water and soil temperature is below 65° F.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
M1-01-04	Robert Fehlman – Western Canal Water District Doak Cotter - Joint Water Districts	Recommend that DWR review brochure produced by the Department of Water Resources for State of California at the time of the building of Oroville Dam and Reservoir.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
M1-01-05	Robert Fehlman – Western Canal Water District Doak Cotter - Joint Water Districts	The University of California has demonstrated that rice plants thrive best when the temperature of irrigating waters range from 59 - 77° F. Even in this range, temperature fluctuation vastly affects the harvest.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.

Comment Number	Source	Summary of Comment	Final Response
M1-01-06	Robert Fehlman – Western Canal Water District Doak Cotter - Joint Water Districts	With the proper outlet structure of Oroville Dam, the temperature of releases can be controlled to serve the agriculture interests of the area.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
M1-01-07	Robert Fehlman – Western Canal Water District Doak Cotter - Joint Water Districts	Requests a review of eight examples of reduced rice production yields developed during the 1999 irrigation season due to colder water temperatures. Examples are set forth in Exhibit A-5	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
M1-02-01	Floyd Higgins Oroville Radio Control Model Airplane Club	The Airplane club would like to see improvements at their flying field on Oroville Road.	The proposed improvements at the flying field may be implemented under the Interim Project Program. Please see Section 3.2 of Appendix E.
M1-03-01	Ron Turner Oroville Foundation of Flight	Would like a year round base to accommodate seaplanes on the Afterbay waterway.	The proposed seaplane base is being considered as a potential interim project. Additional information is needed to assess the project feasibility. The Recreation Work Group will continue to consider this issue during study plan implementation. This may conflict with the DFG wildlife management objectives for the Afterbay.
M1-04-01	Rob MacKenzie Butte County	Issue statement LM1 – Interested in keeping public access open for all the recreation facilities at all times.	Public access to recreation facilities will be considered in Study Plans SP-R1 “Public and Private Vehicular Access” and SP-R6 “ADA Accessibility Assessment.” Security concerns will be considered in SP-R2. SP-L2 will address access to project lands.

Comment Number	Source	Summary of Comment	Final Response
M1-04-02	Rob MacKenzie Butte County	Issue LM3 & LM4 – Facilitate law enforcement needs while keeping all areas open. Don't close an area just because of a problem.	Public access to recreation facilities will be considered in Study Plans SP-R2 "Recreation Safety Assessment" and SP-L2 "Land Management Study."
M1-04-03	Rob MacKenzie Butte County	Are the Draft SD1 comments going to be routed to the work groups and incorporated into the study plans?	Comments on the Draft SD1 have been distributed to the study plan authors for consideration. This allowed for changes in the study plans that have been reviewed by the Work Groups.
M1-04-04	Rob MacKenzie Butte County	Are the work groups going to have approval authority for the consultants that are hired to do the study plans?	DWR and the Harza-EDAW Team will implement the Study Plans.
M1-05-01	Mike Kelley Butte County Tax Payers Association	Interested in obtaining energy from DWR (at cost) that could be used for manufacturing and be limited to the Oroville sphere of influence	DWR has investigated this issue in conjunction with Butte County Tax Payers Association, and determined that it is not practical due to feasibility, cost, and regulatory constraints.
M1-06-01	Peter Maki Citizen of Oroville	Stakeholders are being discounted, and DWR is choosing which (recreation) projects it will fund.	The Recreation Work Group has developed a series of studies to describe the existing recreational resources associated with the Project and evaluate current and future demand for recreation. These studies will allow the DWR and stakeholders to recommend additional facilities for consideration during settlement discussions within the ALP.

Comment Number	Source	Summary of Comment	Final Response
M1-06-02	Peter Maki Citizen of Oroville	DWR Employees and representatives have been hostile to local groups and individuals who have championed projects that will potentially cost DWR money.	<p>DWR employees and representatives have worked collaboratively with local groups including the Feather River Recreation and Parks District, JPA, Oroville Redevelopment Agency, and City of Oroville to negotiate an agreement to fund 2.2 million Riverbend Park Improvements.</p> <p>Additionally, working with local stakeholders and agencies, DWR and the Oroville Collaborative generated a list of consensus-backed interim recreation projects that are currently underway, ahead of relicense application.</p> <p>The Oroville Relicensing collaborative continues to work with local stakeholders to address issues of concern and expects to begin development of PM&E measures.</p>
M1-06-03	Peter Maki Citizen of Oroville	DWR has been a poor land user. Dangerous fuel loads exist on state lands controlled by DWR.	This issue is addressed in Study Plans SP-L5 and SP-T11.
M1-06-04	Peter Maki Citizen of Oroville	DWR controls excess land that could be better served to the taxpayers through recreational usage.	Recreational use of the Project lands will be considered in a series of recreational studies developed by the Recreation Work Group. Study Plan SP-R17 will include recommendations for enhancements to the exiting facilities or additional new facilities for recreation.

Comment Number	Source	Summary of Comment	Final Response
M1-06-05	Peter Maki Citizen of Oroville	DWR contractors have deliberately made the relicensing process burdensome and time-consuming in attempts to discourage local involvement.	DWR adopted the ALP process to allow for greater public participation in the relicensing process. DWR has provided extensive outreach efforts, including public meetings, website postings, and distribution of documents such as this scoping document. Stakeholders have several options for providing comments on the process including public meetings, toll free phone line, e-mails, and written statements. These efforts have been developed to encourage public participation.
M1-06-06	Peter Maki Citizen of Oroville	DWR and FERC discount bulletin 107-6 (Bulletin 117-6) and are in denial to the recreational build-up promised to the Oroville community in the 1960's.	DWR is in compliance with their existing recreation plan. The collaborative licensing process is studying recreational needs, and will evaluate PM&E measure to address the need.
M1-06-07	Peter Maki Citizen of Oroville	DWR and water contractors would like to obtain the license at the least possible cost.	As a State agency, DWR is responsible to the citizens of California for the cost of relicensing. DWR is seeking to balance the costs of relicensing with the value of the benefits to the citizens of the State.
M1-07-01	Ron Davis California State Horseman's Association	DWR has been cordial in working with the public.	Comment noted.
M1-07-02	Ron Davis California State Horseman's Association	Concerned that promises were made of a greater recreation development then has been seen.	DWR is in compliance with their existing recreation plan. The collaborative licensing process is studying recreational needs, and will evaluate PM&E measure to address the need.

Comment Number	Source	Summary of Comment	Final Response
M1-07-03	Ron Davis California State Horseman's Association	Old recreation plans called for equestrian centers, which haven't been built.	The collaborative licensing process is studying recreational needs, and will evaluate PM&E measure to address the need.
M1-07-04	Ron Davis California State Horseman's Association	Would like to see existing equestrian facilities expanded.	The collaborative licensing process is studying recreational needs, and will evaluate PM&E measure to address the need.
M1-07-05	Ron Davis California State Horseman's Association	Interested in facilities that horses owners and non-horse owners can use simultaneously.	The collaborative licensing process is studying recreational needs, and will evaluate PM&E measure to address the need.
M1-07-06	Ron Davis California State Horseman's Association	State Parks has not provided notifications on trail work and closure.	Comment noted.
M1-07-07	Ron Davis California State Horseman's Association	State Parks has not provided notification on the construction of new trails.	Comment noted.
M1-07-08	Ron Davis California State Horseman's Association	Requests that State Parks comply with the recreation plan created during the relicensing process and involved the public.	Comment noted.
M1-07-09	Ron Davis California State Horseman's Association	There is difficulty in getting local people involved in the process	DWR is implementing the ALP because it allows for greater public involvement in the relicensing process. DWR has addressed specific concerns for public involvement through the process and will continue to work with stakeholders in the relicensing of the Oroville Facilities.

Comment Number	Source	Summary of Comment	Final Response
M1-08-01	Kathy Hodges Equestrian Trail Riders and Hikers	State Parks isn't interested in general public input. They are only interested in hearing from people who agree with them. That attitude should change	Opinion noted.
M1-08-02	Kathy Hodges Equestrian Trail Riders and Hikers	A desire is emerging with the local people to take recreation control away from State Parks and give it to local entities.	This issue is addressed in Study Plan SP-R5, Assess Recreation Area Management.
M2-01-01	Mike Wade California Farm Water Coalition	Obviously a reliable and sufficient water supply is critically important in order for California growers to compete.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
M2-01-02	Mike Wade California Farm Water Coalition	Any reduction in water supplies available to the customers of the SWP due to regulatory action under this relicensing process would have severe impacts and should be avoided.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
M2-01-03	Mike Wade California Farm Water Coalition	Just as important as the sufficient quantities of water is the price of water. The SWP is user-financed.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Final Response
M2-01-04	Mike Wade California Farm Water Coalition	Water temperature and crop production in certain parts of the state are closely tied. According to the University of California Cooperative Extension, certain crops, such as rice, need water temperatures of at least 65 degrees during the four-week planting period in late spring and at least 59 degrees until the irrigation season is completed at the end of October.	Study Plan SP-E2 will provide engineering and operations information to address this issue. The issue will be addressed in the PDEA.
M2-01-05	Mike Wade California Farm Water Coalition	We cannot continue to prosper if we price our water supply out of reach of farmers. We cannot meet the challenges of the future if we are constantly reducing the water and power supplies already developed and available for our use.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-02-01	John Coburn State Water Contractors	Retaining or enhancing the current water supply and power generation from the Oroville facilities is essential for maintaining a reliable and affordable water supply for the 23 million Californians and 750,000 acres of farmland served by the SWP.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-02-02	John Coburn State Water Contractors	Operational changes that may be proposed during this relicensing process could negatively impact future water costs. Operational changes that result in reducing power generation capability and flexibility will result in increased costs to the State Water Contractors and ultimately much of the state's population.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Final Response
M2-02-03	John Coburn State Water Contractors	Any loss of generation at Oroville requires the SWP to purchase replacement energy. This not only increases the cost of water, it imposes an additional demand on an already scarce electrical energy supply within California. However, the State Water Contractors' greatest concern is the possibility that operational changes will erode the water supply available to the SWP.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-02-04	John Coburn State Water Contractors	The Oroville Relicensing Process must move forward without duplicating ongoing efforts on an environmental and flood management issues if we are to ensure sound management of the state's limited water resources.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
M2-02-05	John Coburn State Water Contractors	This relicensing process must proceed in full recognition of the overall CALFED Program, the Central Valley Project Improvement Act and other ecosystem restoration initiatives.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
M2-02-06	John Coburn State Water Contractors	The environment and flood management studies undertaken in the relicensing process need to be tightly focused within the project boundaries.	The scope of study plans has been addressed for each study in the Work Group and Plenary study plan review process. Please see the discussion of study plans in Section 1.5 of the Final SD1.
M2-02-07	John Coburn State Water Contractors	Any options considered must be complimentary to ongoing efforts such as the CALFED Program and the Sacramento/San Joaquin Basins Comprehensive Study.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.

Comment Number	Source	Summary of Comment	Final Response
M2-02-08	John Coburn State Water Contractors	Any options considered must not result in any additional losses of SWP water supplies.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
M2-02-09	John Coburn State Water Contractors	Maintaining or increasing the flexibility in releases is required to continue the beneficial use of the Oroville facilities for providing regulation, spinning reserves, non-spinning reserves, replacement reserves and voltage control required for a reliable operation of the SWP and the California power grid.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-02-10	John Coburn State Water Contractors	The State Water Contractors recognize that the relicensing process involves the balancing of water and power supply benefits with environmental, recreation and flood management needs.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible. The ALP provides a forum for review of the issues and concerns throughout the relicensing process. This is the forum to discuss a balance of resource benefits.
M2-02-11	John Coburn State Water Contractors	The State Water Contractors urge the Department of Water Resources and the other relicensing participants to seek innovative and creative solutions to meet those needs, solutions that do not needlessly sacrifice precious power and water resources.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible. The ALP provides a forum for review of the issues and concerns throughout the relicensing process. This is the forum to discuss a balance of resource benefits.

Comment Number	Source	Summary of Comment	Final Response
M2-03-01	Mary Lou Cotton Castaic Lake Water Agency	Any operational changes that result in reducing the power generation capability and flexibility will result in increased costs to the agency and to all the SWP contractors.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-03-02	Mary Lou Cotton Castaic Lake Water Agency	Of greater concern to our agency and the other contractors is the possibility that operational changes will erode the water supply available to the project. It's hard to imagine any credible operational changes that would justify reducing the water supply yield from the Oroville facilities.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
M2-03-03	Mary Lou Cotton Castaic Lake Water Agency	Concerned about the potential for duplication of efforts between the Oroville Relicensing Process, the CALFED Bay-Delta Program, the Central Valley Project Improvement Act and other programs.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
M2-03-04	Mary Lou Cotton Castaic Lake Water Agency	The environmental studies undertaken in the relicensing process need to be tightly focused within the project boundary.	The scope of study plans has been addressed for each study in the Work Group and Plenary study plan review process. Please see the discussion of study plans in Section 1.5 of the Final SD1.
M2-03-05	Mary Lou Cotton Castaic Lake Water Agency	Any options considered must be complimentary to the CALFED Program and not result in losses to SWP water supplies.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E. Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Final Response
M2-03-06	Mary Lou Cotton Castaic Lake Water Agency	The agency recognizes that the FERC relicensing process involves the balancing of power and water supply benefits with environmental, recreational and flood management needs. We urge that this process seek solutions to meet these needs, but they should be solutions that do not sacrifice water and power resources.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible. The ALP provides a forum for review of the issues and concerns throughout the relicensing process. This is the forum to discuss a balance of resource benefits.
M2-04-01	Dan Smith Association of California Water Agencies	We want to urge that the participants in this proceeding be aware that the actions they take, the decisions they make will have significant impact on most of California and most Californians.	Comment noted.
M2-04-02	Dan Smith Association of California Water Agencies	In our view, a successful relicensing proceeding will be one that retains the important power and water benefits of the Oroville facilities.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-05-01	Nan Nalder (for Domonic DiMare) CA Chamber of Commerce	Very concerned that the entire output of the Oroville Facilities is retained to keep the grid stable and to provide the energy that we so very much need to keep California in a stable sense.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
M2-05-02	Nan Nalder (for Domonic DiMare) CA Chamber of Commerce	Like electricity, California faces difficult challenges concerning water supply and price.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Final Response
M2-06-01	Ed Ely (for Rex Hime) CA Business Properties Association	It is so important that we maintain the water supply that we currently have because we can't afford to lose any more ground.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
M2-06-02	Ed Ely (for Rex Hime) CA Business Properties Association	Concerned about any regulatory proceeding that would further reduce our current water supplies.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
M2-06-03	Ed Ely (for Rex Hime) CA Business Properties Association	The CALFED solution area encompasses the Feather River Watershed, and any additional environmental actions contemplated by this relicensing must not be duplicative of those efforts.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
M2-06-04	Ed Ely (for Rex Hime) CA Business Properties Association	The relicensing process must fully weigh its actions in light of their potential negative impacts.	The ALP allows for Plenary Group and Work Group review of the issues and concerns throughout the relicensing process including the potential for negative project-related impacts.
M2-06-05	Ed Ely (for Rex Hime) CA Business Properties Association	California cannot afford to lose any more water due to regulatory fiat.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Final Response
M2-07-01	Geoffrey Vanden Heuvel Southern CA Water Committee	We cannot afford to further reduce the amount of supplement water necessary to support Southern California's economy and population.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
M2-07-02	Geoffrey Vanden Heuvel Southern CA Water Committee	Our goal for the relicensing of the Oroville hydropower facilities is to maintain the level of benefits we currently receive from water stored at the reservoir and to continue to use project-generated power to help offset the cost of that water.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-08-01	Vincent Wong Alameda Co. Flood Control and Water Conservation District, Zone 7	I'm here to stress the importance of retaining and enhancing the water supply and power generation of the Oroville facilities. It's essential for maintaining the economy of my community as well as California as a whole.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-08-02	Vincent Wong Alameda Co. Flood Control and Water Conservation District, Zone 7	Any operational changes that reduce power generation will increase the cost to my constituency.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-08-03	Vincent Wong Alameda Co. Flood Control and Water Conservation District, Zone 7	Any operational changes that will erode the water supply are very stressful to us.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Final Response
M2-08-04	Vincent Wong Alameda Co. Flood Control and Water Conservation District, Zone 7	It is important for the relicensing process to recognize the CALFED, the Central Valley Improvement Act and other ecosystem restoration initiatives.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.
M2-09-01	Wilson Head CA Independent System Operator	The ISO controlled grid has ties to the hydroelectric pump-generators at Hyatt – Thermalito. Difficulties presently exist with the ISO controlled grid. The Oroville Facilities help the ISO manage these problems.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
M2-09-02	Wilson Head CA Independent System Operator	The ISO looks forward to undiminished generating capacity during the FERC relicensing process both for the energy it supplies to California and the additional reliability it provides to the ISO grid.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
M2-09-03	Wilson Head CA Independent System Operator	Upon relicensing, the pump generator complex would be counted upon to continue to help mitigate these electric system operational issues and remain standing as a basic infrastructure element for reliable Northern California electric system.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
M2-10-01	Don Marquez for Thomas Clark Kern County Water Agency	Concerned that the operational changes that result in reducing power generation capability and flexibility result in increased water costs to the Agency and ultimately to our landowners and other ratepayers.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.

Comment Number	Source	Summary of Comment	Final Response
M2-10-02	Don Marquez for Thomas Clark Kern County Water Agency	Of equal or greater concern to the Agency and the other contractors is the possibility that operational changes will erode our water supply.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
M2-10-03	Don Marquez for Thomas Clark Kern County Water Agency	It is inconceivable that any potential operational change would justify further reducing the water supply yield from the Oroville facilities.	Throughout the relicensing process, DWR will focus on retaining the water supply values and benefits of the Oroville Facilities to the extent possible.
M2-11-01	Lisa Wolfe State Electricity Oversight Board	Overall, the EOB underscores the important and significant electric contribution of the Oroville Facilities, including the provision of needed ancillary services that maintain grid reliability.	Throughout the relicensing process, DWR will focus on retaining the power supply values and benefits of the Oroville Facilities to the extent possible.
M2-12-01	Ken Kules Metropolitan Water District	The Project operates to provide peak power to the state of California, and the SWP as a user emphasizes its use of power off peak. And we believe that to be very important.	Throughout the relicensing process, DWR will focus on retaining the water supply / power supply values and benefits of the Oroville Facilities to the extent possible.
M2-12-02	Ken Kules Metropolitan Water District	We strongly believe that it would be highly inappropriate for the process to second-guess the measures and level of protection for the environment developed through the CALFED process.	Please see DWR approach for coordination with comprehensive planning efforts in Section 3.3 of Appendix E.

Comment Number	Source	Summary of Comment	Final Response
M2-12-03	Ken Kules Metropolitan Water District	While the reliability of existing SWP supplies is critical for the regional economy, additional supplies from Oroville are not part of our plans to meet Southern California's future water supply needs. We respectfully request that this fundamental fact be recognized as this process moves forward.	Comment noted.

Appendix E
Attachment 2

Comment Letters



United States Department of the Interior

NATIONAL PARK SERVICE
California Hydro Program
801 "I" St., Suite 156-B
Sacramento, California 95814

November 16, 2001

Mr. Len Marino
Department of Water Resources
State Water Project Analysis Office
1416 Ninth St.
P. O. Box 942836
Sacramento, CA 94236

Subject: Draft NEPA Scoping Document 1, FERC Project #2100

Dear Mr. Marino:

The National Park Service (NPS) submits the following comments on Draft Scoping Document 1 (SD1) under FERC regulations 18 CFR Section 16.8(b)(4). Under the National Park Service Organic Act (39 Stat. 535), Outdoor Recreation Act (Pub Law 88-29), the Wild and Scenic Rivers Act (Pub. Law 90-542), Council on Environmental Quality Guidelines (45 FR 59190-59191) and Federal Energy Regulatory Commission Guidelines the NPS is authorized to provide technical assistance for recreation planning in the licensing of hydropower facilities. It is the policy of the NPS to represent the national interest regarding recreation, and to assure that hydroelectric projects subject to re-licensing recognize the full potential for meeting present and future public outdoor recreation demands while maintaining and enhancing a quality environmental setting for those projects. We have the following comments:

DWR's Approach to Relicensing: As we have indicated previously, NPS supports Department of Water Resources' (DWR) decision to pursue the Alternative License Process for this relicensing. We have been involved since the project kicked off in Fall, 2000 and have made every effort to attend the periodic plenary and recreation work group meetings. It has been clear from the start that DWR has made considerable effort to reach out to local constituents and federal, state, and local resource agencies. The Communications Protocol was well conceived, produced collaboratively, and has served the group well in the process thus far. We have also been pleased with the effective use of third-party facilitation in its meetings.

F-01-01

Section 1.1. Applicants Proposed Action: You state that no structural or operational modifications are envisioned at this time. However Section 3.1.2 raises the specter of an "engineering and operations issue" which could be considered for adoption that concerns NPS. The installation of Obermeyer gates on the emergency spillway ogee crest has the potential of affecting the nationally-designated Feather Wild and Scenic River (Middle Fork). If Lake Oroville's water level exceeded elevation 900' (the current height of the emergency [ungated] spillway), it would invade the boundary of the designated river segment. Therefore, if this alternative is recommended, we would expect that a study be conducted to analyze its affect on the Middle Fork.

F-01-02

Sections 4.0 and 4.1, Project-Specific Consolidated Resource Issues and ALP Issue Resolution Process. NPS is generally comfortable with the "Issue Statements" for Recreation and Socio-economics, but we renew our original concern regarding DWR's self-imposed obligation to tie them back to the "Resource Issues, Concerns, and Comments" which were recorded in the initial public meetings and subsequent brainstorming sessions. We have previously stated that, to us, the master list represents a distillation of some 117 random comments that did not necessarily meet the license-applicability tests of project nexus. Even though they have been relegated to appendices (A&B) in the Draft, their continued presence gives one the impression that they were all valid and will be addressed in studies. They may not be. Having said that, we have been encouraged by the licensee's consultants ability to sort through the issues/comments and fashion relevant issue statements. They have subsequently developed numerous study plans that indicate to us that the most fundamental issues will be adequately addressed.

F-01-03

Section 4.8, Recreation and Socio-economics: For the most part, the recreation resource issues are being adequately examined in the seventeen recreation study plans which have been proposed. We remain perplexed at Issue S2, how providing lower utility rates to the Oroville area applies to this relicensing proceeding given the contractual constraints of the State Water Project.

F-01-04

F-01-05

Section 5.1, Cumulative Effects. An analysis of the recreation and socio-economic effects of several upstream-projects are particularly important in this proceeding. The recent settlement in Rock Creek/Cresta (FERC #1962), and Poe (FERC #2107) and North Fork Feather River (FERC #2105) which are currently being relicensed should all be considered for their cumulative effect on the Feather River Project. Each of them provide detailed, contemporary study results from which to base cumulative effect analyses.

F-01-06

General Comment:

DWR is pursuing a very aggressive schedule in this proceeding. Although it has placed a heavy burden on consultants to produce several iterations of SD1 and has accelerated the development of study plans, the schedule allows for three full field seasons for conducting the studies. Many of the recreation studies begin early in 2002 and there should be sufficient time to adjust study objectives and methodologies as needed to ensure valid results. Our initial impression is that the consultants are doing an excellent job of producing study plans, keeping the Recreation and Socio-economic Work Group informed, and responding effectively to our concerns.

F-01-07

We appreciate the opportunity to provide input to this document. NPS is committed to our continued involvement in the Study Plan Task Force and Recreation Socio-economic Work Group and to being an active member of the Plenary. Please contact me at (916) 414-2355 for further assistance or questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Harry B. Williamson", followed by a long horizontal flourish line.

Harry B. Williamson
Northern California Hydro Coordinator



United States
Department of
Agriculture

Forest
Service

Plumas
National
Forest

159 Lawrence Street
P.O. Box 11500
Quincy, CA 95971-6025
(530) 283-2050

File Code: 2770

Date: November 14, 2001

Mr. Henry M. Ramirez
Project Power Planning Branch
State Water Project Analysis Office
Department of Water Resources
1416 Ninth Street
Sacramento, CA 94236-0001

Dear Mr. Ramirez:

The following is the Forest Service response to your Oroville Facilities (FERC Project No. 2100) NEPA Scoping Document 1 and CEQA Notice of Preparation (SD1) issued on September 27, 2001. As per regulation, this response is being made within the 60-day public comment period.

While no project facilities have been constructed on National Forest System lands, Lake Oroville does inundate National Forest System lands located on the North, Middle, and South forks of Lake Oroville. Pursuant to Section 4(e) of the Federal Power Act, the Forest Service has the authority to stipulate license conditions to provide for the adequate protection and utilization of National Forest System lands and to ensure that the license will not interfere or be inconsistent with the purpose for which the National Forests were created. As Forest Supervisor, it is my responsibility to ensure that the operation and maintenance of the Oroville Facilities are consistent with the National Forest Management Act and the Direction, and Standards and Guidelines for achieving the long term Goals and Objectives described in the *Plumas National Forest Land and Resource Management Plan* as amended by the Regional Forester's decision implementing the *California Spotted Owl Sierran Province Interim Guidelines* and the *Sierra Nevada Forest Plan Amendment*. It is my expectation that the proposed studies will help identify and focus on appropriate 4(e) stipulations.

F-02-01

F-02-02

A listing of applicable Forest Plan Standards and Guidelines was submitted to you on January 29, 2001. Some of the Standards and Guidelines were subsequently modified or replaced by Standards and Guidelines incorporated into the *Sierra Nevada Forest Plan Amendment*. While these changes have not been sent to you, it is unlikely that the updated Standards and Guidelines would result in alterations to Issue Statements appearing in SD 1. A listing of items the Forest Service wishes to have addressed during relicensing was submitted on March 2, 2001. The Forest Service has participated in the formulation of Issue Statements and Study Plans.

F-02-03

F-02-04

Environmental and Developmental Issues

The Work Groups organized by the Department of Water Resources has done an excellent job of identifying issues. For National Forest interests, I consider the following issues most important to decision-making:

4.3 Water Quantity and Quality (W)
W3, W5, and W7

F-02-05



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4.4 Fisheries Resources (F)
F1, F4, F7, F8, and F13

☐ F-02-06

4.5 Terrestrial Resources (T)
T1 through T11

☐ F-02-07

4.7 Cultural Resources (C)
CR1 through CR4

☐ F-02-08

4.9 Land Use, Land Management and Aesthetic Resources (LU/LM/A)
LU1 and LU2

☐ F-02-09

The current proposal addresses federally listed Threatened and Endangered species in issues F13 and T2. The Forest Service needs a similar evaluation of agency identified Sensitive Species for those portions of the project that are located on or affecting National Forest System lands.

☐ F-02-10

The relationship of the project to the Middle Fork Feather Wild and Scenic River needs to be studied. The issue to investigate is whether operation and maintenance of the project encroaches on the area or unreasonably diminishes the scenic, recreational, and fish and wildlife values present in the area on the date of designation of the Middle Fork of the Feather River (October 2, 1968) as a component of the National Wild and Scenic River System (reference PL 92-542, 16 USC Ch 28 Sec 1278).

☐ F-02-11

Reasonable Alternatives

Although it is too early in the relicensing process to identify alternatives, since the proposed action has not been identified, I request that the proposed action or one alternative include any mandatory conditions required by the Forest Service.

☐ F-02-12

Scope and Depth of Analysis

It is difficult to identify the scope of analysis without clearly understanding the cause and effect relationship between the project operations and a particular resource. Project effects do not necessarily end at the project boundary. The scope of studies should include the area affected by the project, and not be limited by the project boundary. As results from the studies are available, it should be possible to refine the analysis for the draft Environmental Assessment.

☐ F-02-13

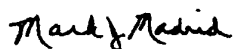
Issues That Do Not Require Detailed Analysis

At this early stage in the relicensing process, it is difficult to identify issues that need less analysis.

☐ F-02-14

Please contact Mike Taylor, Hydrologist, at (530) 534-6500 or mftaylor@fs.fed.us if you have any questions.

Sincerely,



MARK J. MADRID
Forest Supervisor

ORIGINAL



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southwest Region
National Marine Fisheries Services
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404

CHIEF
OFFICE OF THE SECRETARY
OCT 16 PM 3:15
FEDERAL BUREAU OF INVESTIGATION

October 11, 2001 F/SWR4:SAE

Henry M. Ramirez, Manager
Oroville Facilities Relicensing Program
Department of Water Resources
1416 Ninth Street, Box 942836
Sacramento, CA 94236

Dear Mr. Ramirez:

This concerns your September 27, 2001, draft NEPA scoping document for the Oroville facilities relicensing (FERC NO. 2100). We appreciate the opportunity to participate in the Alternative Licensing Process (ALP) for the Oroville Project. During the ALP meetings Division of Water Resources (DWR) staff and contractors requested the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (Services) to provide a presentation to the ALP environmental working group on scoping. Specifically, the Services were requested to clarify agency positions on the scope of studies necessary to support relicensing. In response to DWR's request, the attached document was prepared jointly by the Services and provided to the Environmental Working Group during the Services' September 26 presentation on scoping. In summary, the Services' Scoping Document defines the regulatory framework for determining required scope of studies pursuant to the National Environmental Policy Act, the Endangered Species Act, and the Federal Power Act. Using the Services' Scoping Document for guidance, NMFS developed the following scoping statement for addressing potential impacts to salmon and steelhead and their habitats associated with Oroville Project facilities and operations.

Scope of NMFS analysis for Central Valley fall and spring-run chinook salmon, and Central Valley Steelhead

To determine a species' needs, NMFS often looks to historical (or unimpaired flow) conditions (and associated physical, chemical, and biological processes) as a guide to conditions associated with self-sustaining and self-regulating populations. Where used, these conditions are not necessarily management goals. Instead, they serve as an important reference point for gauging the effects of a project on the species' ability to survive in the current ecosystem. In such cases, a project often has fewer impacts on a species where it minimizes or avoids changes to, and/or mimics the natural conditions to which the species has adapted and are necessary for the species' long-term survival.

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FERC DOCKET

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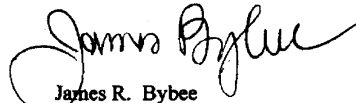
This approach is used to determine if the proposed action is likely to degrade the quantity and quality of habitat necessary to support survival and recovery of the populations of listed salmonids in the action area. This assessment approach is intended to determine if the frequency, duration, and magnitude of impacts carried forward into the future by project operations are likely to impact the size, number, dynamics, or distribution of the salmonid populations in the action area in ways that can be reasonably expected to appreciably reduce their likelihood of both survival and recovery. NMFS uses the most current site specific information where such information exists and reflects the best scientific and commercial data. In cases where information is lacking, NMFS often relies upon the scientific literature to judge likely effects. The action area for the Oroville Project includes the entire Feather River mainstem below the Project facilities to the confluence with the Sacramento River continuing downstream to the Sacramento-San Joaquin Delta and thence to Pacific Ocean. However, the extent of the action area may change as new information, particularly on cumulative impacts, is generated through the relicensing process.

F-03-01

F-03-02

Thank you for your cooperation in the above. If you have questions concerning these comments, please contact Mr. Steve Edmondson at (707) 575-6080.

Sincerely,



James R. Bybee
Northern California Habitat Manager

cc: Mr. David P. Boergers, Secretary, FERC, ES-1 (8-copies)
Mr. Mike Aceituno - NMFS, Sacramento
Mr. Bruce Oppenheim - NMFS, Sacramento

enclosures

**Joint National Marine Fisheries Service and
U.S. Fish and Wildlife Service Presentation on
Scope of Environmental Analysis for the
Oroville Hydroelectric Project Relicensing.
(FERC No. 2100)**

SCOPE OF OROVILLE RELICENSING

The scope of the proposed action is FERC's issuance of a new license to the State of California Department of Water Resources (DWR) to operate the Oroville Hydroelectric Project (FERC No. 2100) and appurtenant facilities. When FERC considers whether to re-license a hydropower project, it must review the project to ensure it is best adapted to a comprehensive plan for, among other things, the adequate protection, mitigation and enhancement of fish and wildlife, including related spawning grounds and habitat.

F-03-03

Project Purpose

According to the Initial Information Package (IIP) for the Oroville Project relicensing, the Project purposes are described as: "a multipurpose water supply, flood control, power generation, recreation, fish and wildlife, and salinity control project." Further, Project operations are specifically managed as follows: "On a weekly basis, [Project] releases are scheduled to accommodate water supply requirements, water quality and quantity requirements in the Sacramento-San Joaquin Delta, instream flow requirements in the Feather River, power requirements, and minimum flood control space."¹

Scope of Consultation Under section 7 Endangered Species Act.

Contents of Initiation Package

Formal consultation is necessary if the federal action "may affect" listed species. Although there is no specific time frame for submitting an initiation package, agencies must review their actions "at the earliest possible time" to determine whether formal consultation is required. If a "may affect" situation exists, formal consultation must be initiated promptly. The joint NMFS and U.S. Fish and Wildlife Service, Endangered Species Act Handbook at page 4-4 (1997) states that:

To comply with the section 7 regulations (50 CFR §402.14(c)), the initiation package is submitted with the request for formal consultation and must include, all of the following:

- a description of the action being considered;
- a description of the specific area that may be affected by the action;
- a description of any listed species or critical habitat that may be affected by the action;
- a description of the manner in which the action may affect any listed species or critical habitat, and an analysis of any cumulative effects;
- relevant reports, including any environmental impact statements, environmental assessments, biological assessment or other analyses prepared on the proposal; and
- any other relevant studies or other information available on the action, the affected listed species, or critical habitat.

¹ State of California, The Resources Agency, Department of Water Resources. *Federal Energy Regulatory Commission License Project No. 2100. Initial Information Package; Relicensing of the Oroville Facilities.* January, 2001.

The joint Handbook in the section "Determining the effect of ongoing water projects" (at 4-28) states that when analyzing the effects of ongoing federal discretionary operations of water projects and water contracts, the Services' are to approach their analysis in the same way that they would analyze a new license or contract, thus considering:

- *The total effects of all past activities, including effects of the past operation of the project, current non-federal activities, and Federal projects with completed section 7 consultations, form the environmental baseline; [emphasis in original]*
- *To this baseline, future direct and indirect impacts of the operation over the new license or contract period, including effects of any interrelated and interdependent activities, and any reasonably certain future non-Federal activities (cumulative effects), are added to determine the total effect on listed species and their habitat.²*

Action Area

The "action area" is defined as "*all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action*" (50 CFR 402.2).

Cumulative Impacts

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Critical Habitat

The FERC described its responsibilities to analyze and document project impacts on listed species and critical habitat in its February 1993 document titled: HYDROPOWER LICENSING AND ENDANGERED SPECIES - Procedures for Complying with the Endangered Species Act.³ Under the heading, *Critical Habitat*, FERC details its responsibilities as follows:

Our findings dealing with critical habitat are made independent of the effect on known

²As defined in 50CFR402:

Indirect effects

Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur.

Interrelated actions

Interrelated actions are those that are part of a larger action and depend on the larger action for their justification.

Interdependent actions

Interdependent actions are those that have no independent utility apart from the action under consideration.

³ FERC Paper No. DPR-7

individuals. Whether or not the critical habitat is occupied by the species is not a factor in determining effect.

Our analysis should consider the effects of the action on the principal biological or physical constituent elements within the defined area that are essential to the conservation of the species ("primary constituent elements"). These primary elements may include roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types (50CFR § 424.12). We also must look at the indirect effects of the proposed action on critical habitat located adjacent to the project area.

Interagency Task Force (ITF) Report on Improving Coordination of ESA Section 7 Consultation with the FERC Licensing Process⁴

The ITF developed the following guidelines for determining the scope of a licensing action:

"Scope of Effects" of Proposed Action

Issues: The regulations on Section 7 consultation list examples of "action" as actions directly or indirectly causing modifications to the land, water, or air. Indirect effects are delayed effects caused by the proposed action which are reasonably certain to occur. The Service and FERC sometimes differ on the "scope of effects" of a proposed action. These differences concern whether the effects in question are reasonably related to the proposed action, and whether there is a "reasonable" likelihood that indirect effects may result from the proposed action.

Proposed Solutions:

- 1. Participants are encouraged to identify the scope of effects early in the FPA process thereby allowing sufficient time to adequately resolve concerns while avoiding delays that may otherwise result.*
- 2. In its cover letter transmitting its NEPA document or Biological Assessment, FERC will explain how it considered direct and indirect effects of the proposed action, any cumulative effects, and the effects of any interrelated or interdependent actions, as well as the basis for its findings.*
- 3. In assessing the adequacy of information provided, the Service will be as specific as possible about what effects or actions it believes FERC should have considered, or did not consider in sufficient detail.*

4

Prepared by the Work Group on the Coordination of Federal Mandates:
Federal Energy Regulatory Commission
U.S. Department of the Interior
U.S. Department of Commerce
U.S. Department of Agriculture
Environmental Protection Agency
Advisory Council on Historic Preservation

National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*) is the foundation of modern American environmental protection in the United States and its commonwealths, territories, and possessions. The implementing regulations for NEPA require that Federal action agencies must analyze the direct and indirect environmental effects and cumulative impacts of project alternatives and connected actions.

The regulations emphasize agency cooperation early in the NEPA process. Section 1501.6. Section 1501.7 on "scoping" also provides that all affected Federal agencies are to be invited to participate in scoping the environmental issues and to identify the various environmental review and consultation requirements that may apply to the proposed action. Further, Section 1502.25(b) requires that the draft EIS list all the federal permits, licenses and other entitlements that are needed to implement the proposal.

Indirect Effects

The Council on Environmental Quality (CEQ) regulations under 40 CFR 1508.8 (b) defines indirect effects as effects "*which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include human population growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems*".

Cumulative Impacts

Cumulative impacts are those combined effects on quality of the human environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what Federal or non-Federal agency or person undertakes such other actions (40 CFR 1508.7, 1508.25(a), and 1508.25(c)). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Connected Actions

The CEQ regulations require "connected actions" to be considered together in a single EIS. See 40 CFR §1508.25 (a)(1). "*Connected Actions are defined, as actions that: (i) automatically trigger other actions which may require environmental impact statements; (ii) cannot or will not proceed unless other actions are taken previously or simultaneously; (iii) are independent parts of a larger action and depend upon the larger action for their justification.*"

DWR's operation and maintenance of its Oroville Project and resulting irrigation and other land use practices meet the above criteria for "Indirect Effects" "Cumulative Impacts" and "Connected Actions". For instance, DWR's facilities and operations are inextricably intertwined concerning the impoundment, release from storage, conveyance, and use of the waters of the Feather River.

Because of the potentially significant impact of relicensing on ESA listed species, and the significant controversy concerning water supply issues in California, the Service's believe that

F-03-04

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FERC should prepare an Environmental Impact Statement (EIS) for the federal action of relicensing the Project.

↑ F-03-05

Under § 102 (2) (c) of NEPA, a "detailed statement" of "alternatives to the proposed action" is central to the EIS and forms the basis for any subsequent Record of Decision. The EIS's analysis should be sufficiently detailed to reveal the agency's comparative evaluation of the environmental benefits, costs and risks of the proposed action and each reasonable alternative. NEPA's alternatives requirement is subject to a "rule of reason" and that necessarily governs which alternatives the agency must discuss, and the extent to which it must discuss them.⁵

Regarding the scope of specific studies, all studies must be sufficient to fully describe impacts of the proposed hydroelectric project license and alternatives. Studies designed to describe water quality, hydrology and other temporally and spatially broad parameters must include an analysis of project impacts extending downstream to the confluence with the ocean unless specific threshold analyses indicate otherwise. These studies must include direct, indirect and cumulative impacts. Similarly, records indicate that anadromous salmonids historically accessed stream habitats upstream of Lake Oroville. Therefore, absent information indicating that fish passage is technologically infeasible, would result in comparably greater negative impacts, or would provide lesser benefits to anadromous salmonids than other alternative enhancement measures, we must assume that access to historic habitats is necessary to meet our resource management goals and objectives for anadromous fish. The licensee must conduct adequate studies to fully develop a range of alternatives for providing fish passage including plans for restoring access to historic habitats.

F-03-06

F-03-07

CEQ Guidance on Determining Scope

In its report *Considering Cumulative Effects Under the National Environmental Policy Act* The CEQ developed the following guidelines for determining the scope of a licensing action:

Identifying Geographic Boundaries

For a project-specific analysis, it is often sufficient to analyze effects within the immediate area of the proposed action. When analyzing the contribution of this proposed action to cumulative effects, however, the geographic boundaries of the analysis almost always should be expanded. These expanded boundaries can be thought of as differences in hierarchy or scale. Project-specific analyses are usually conducted on the scale of counties, forest management units, or installation boundaries, whereas cumulative effects analysis should be conducted on the scale of

⁵ In its document, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" the CEQ states: "The degree of analysis devoted to each alternative in the EIS is to be substantially similar to that devoted to the 'proposed action.' Section 1502.14 is titled 'Alternatives including the proposed action' to reflect such comparable treatment. Section 1502.14(b) specifically requires 'substantial treatment' in the EIS of each alternative including the proposed action. This regulation does not dictate an amount of information to be provided, but rather, prescribes a level of treatment, which may in turn require varying amounts of information, to enable a reviewer to evaluate and compare alternatives." *Id.*

human communities, landscapes, watersheds, or airsheds, Choosing the appropriate scale to use is critical and will depend on the resource or system.....

A useful concept in determining appropriate geographic boundaries for a cumulative effects analysis is the project impact zone..... For a proposed action or reasonable alternative, the analysts should

- Determine the area that will be affected by that action. That area is the project impact zone.*
- Make a list of the resources within that zone that could be affected by the proposed action.*
- Determine the geographic areas occupied by those resources outside of the project impact zone. In most cases, the largest of these areas will be the appropriate area for the analysis of cumulative effects.*
- Determine the affected institutional jurisdictions, both for the proposing agency and other groups.*

Project impact zones for a proposed action are likely to vary for different resources and environmental media. For water, the project impact zone would be limited to the hydrologic system that would be affected by the proposed action.

Federal Power Act

The Federal Power Act (FPA) under 16 U.S.C. s 797(e) states:

In deciding whether to issue any license, the Commission, in addition to the power and development purposes for which licenses are issued, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality.

It is implicit that in order to provide for "protection, mitigate of damage to, and enhancement of fish and wildlife....." FERC must first evaluate environmental impacts. The FPA clearly distinguishes between the project boundaries and the environment affected by the project (action area). For instance, FERC's relicensing regulations at 18 CFR 16.8(b)(i) require that the applicant provide detailed maps of the project boundaries and at 16.8(b)(iv) the applicant must additionally provide an identification of the environment affected, or to be affected, and proposed mitigation. FERC wouldn't make these separate requirements of a description of the affected environment if it was the same as the project boundaries.

Further, in FERC's regulations stipulating what must be included in a license application, at 18 CFR 4.41(f)(3), FERC requires information on fish and wildlife "in the vicinity of the proposed project", not just the project boundaries. In 18 CFR 4.41(f)(3)(i), FERC requires a description of resources in the "proposed project area and its vicinity" and requires mitigation for impacts on fish and wildlife. Thus, FERC clearly distinguishes between the project area and the vicinity for purposes of considering impacts on natural resources.

Regulations governing the preparation of the license application require the inclusion of an Exhibit E. FERC's guidance on what must be in Exhibit E includes a summary of the resource agencies' views on resource needs in the project vicinity and region. This further confirms the absolute requirement to collect information on resources affected beyond the project boundaries.

F-03-08

From a purely scientific basis, by its very nature, a dam could affect resources well beyond project boundaries. If the project is affecting the environment down or upstream of the actual project boundaries, it would be arbitrary and nonsensical to consider and mitigate only for impacts occurring within the project boundaries.

F-03-08

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FERC RELICENSING STATEMENT

RE: FERC Project No. 2100, Oroville Hydro Power Facilities

On behalf of California Business Properties Association (CBPA) I want to thank the Commission for this opportunity to be able to address the vital importance of the Lake Oroville hydro power facilities in the state's overall economy.

By way of background, California Business Properties Association is the leading designated legislative advocate for the International Council of Shopping Centers (ICSC), the California chapters of the National Association of Industrial and Office Properties (NAIOP), the Associated Builders and Contractors of California (ABC), Commercial Real Estate Women (CREW) and the Institute of Real Estate Management (IREM). CBPA is one of the most successful voices for commercial property entrepreneurs of California, representing over 5,000 members.

CBPA proudly represents major land owners, developers, retailers, tenants, contractors, builders, lawyers, brokers, and individuals involved in all aspects of commercial industrial real estate.

I can tell you from firsthand experience that it is a difficult, time consuming and contentious process in this state to bring new water supplies on-line to meet the needs of our growing economy. That is why it is so important that we maintain the water supplies we currently have because we can't afford to lose any more ground.

The business community became actively involved in California water issues during the last drought, when regulatory constraints and naturally occurring water shortages put the state's economy and environment on a collision course. At our prompting, the state of California and the federal government developed the Bay Delta Accord to stabilize environmental resources in the Bay Delta and restore a measure of reliability to water supplies derived from the state and federal water projects.

From that agreement, we embarked on a lengthy public process known as the CalFed Bay Delta Program, which sought to develop and implement a long term, comprehensive solution to the environmental and water management conflicts that had long plagued the Bay Delta estuary. That process culminated last year in a Record of Decision between the state and federal government.

G-01-01

This year we are working hard to get federal legislation passed to implement that agreement.

Over the past decade, we have seen well over one million acre feet of water, previously dedicated to use on farms and in the cities, reallocated for environmental purposes. A cornerstone of the CalFed solution is recognizing the need to develop more water storage. We are certainly not there yet, and we have a long way to go before we attain that critical goal.

In the meantime, we must draw a line in the sand and closely question any regulatory proceeding that would further reduce our current water supplies. The bar must be raised high to justify any such an action. The CalFed solution area encompasses the Feather River watershed, and any additional environmental actions contemplated by this relicensing must not be duplicative of those efforts.

G-01-02

G-01-03

Californians have invested more than \$9 billion in the State Water Project, a significant portion of which went to building Lake Oroville and the associated hydro power facilities. Today, more than 30 years after the first deliveries from the Project were made to the Bay Area, we still do not have the full supply developed.

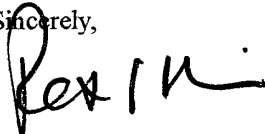
An adequate supply of high-quality water is one of the key priorities of the California business community. Actions taken in this relicensing process will not affect just the immediate Oroville area, but will resonate throughout most of California. This process must fully weigh its actions in light of their potential negative impacts. California cannot afford to lose any more water due to regulatory fiat.

G-01-04

G-01-05

Thank you for your consideration of this information.

Sincerely,



REX S. HIME,
President and Chief Executive Officer



CALIFORNIA CHAMBER of COMMERCE

**Testimony Presented to the
Federal Energy Regulatory Commission
By the California Chamber of Commerce
In Support of the Relicensing of the California
State Water Project Lake Oroville Hydroelectric
Facilities.**

October 29, 2001

The California Chamber of Commerce, representing over 12,000 California businesses, appreciates the opportunity to provide the Commission with comments concerning the relicensing of the Lake Oroville hydropower facilities.

For more than a year, California has struggled to extricate itself from the grips of an energy crisis. Last fall and winter, California weathered a series of rolling blackouts attributable to an insufficient supply of electricity. There were many days where the state's reserve margin dipped below 1.5 percent. Our business leaders and elected officials have come to appreciate that every megawatt counts. Managing the state's electrical grid requires precision and to a certain extent luck.

Over reliance on electricity generated outside of the state made our state and economy vulnerable to blackouts. Recognizing the need for increased generation the state has streamlined the approval process for building new generation. It is expected that by September 1, 2002 the state will bring on line 6000 megawatts of new generation. As we strive to add new generation in California we should also strive to maintain existing generation such as the 762 megawatts generated by the Hyatt Power plant and the Thermalito power complex. Preservation of this existing generation will allow the State Water Project to maintain price stability for its contractors through partial self-sufficiency. Money saved in generating its own power is money that is not spent in a volatile spot market for power and is a cost that is not passed on to contractors.

G-02-01

Like electricity, California faces difficult challenges concerning water supply and price. As the state's population continues to grow the demand for water grows as well. It is expected that the price of water will increase with demand. Unlike energy or other commodities, there is little the state can do to control the production of water, it's controlled by a higher authority. Cost control is the most meaningful means by which the price of water can be managed. Allowing the State Water Project to maintain its electrical output from the Lake Oroville facilities will help it keep the cost of water down for its contractors.

G-02-02



ASSOCIATION OF CALIFORNIA WATER AGENCIES

Statement for the
Public Scoping Session on
FERC Project No. 2100, Oroville Hydropower Facilities
October 30, 2001,
Secretary of State Building Auditorium, Sacramento, California

Presented by Dan Smith, Director of Regulatory Affairs

ACWA's mission is to assist its members in promoting the development, management and reasonable beneficial use of water quality water at the lowest production cost in an environmentally balanced manner.

My name is Dan Smith. I'm Director of Regulatory Affairs for the Association of California Water Agencies. ACWA represents more than 440 public water agencies that supply about 90 percent of the delivered water in the state. Our membership includes many of those agencies that hold long-term water supply contracts with the California Department of Water Resources for supplemental water supplies from the State Water Project.

ACWA and many other water leaders have worked throughout the past century to assure that a growing and developing California has had the water needed to meet the varying needs of the state. It has been a struggle this past 20 years to provide adequate and reliable water supplies for the state's dynamic economic growth and population increases. Unfortunately, those efforts have not yet been successful. In fact, we have seen the opposite occur—a steady reduction in the water supply available to our cities and farms over the past decade in particular.

The regulatory and legislative supply reductions have cut the amount of water available in dry years by more than one million acre-feet. Efforts to replace not only those lost supplies but to gain some ground on looming water shortages have been painstakingly slow and colored by controversy at every step. It is highly likely that California will suffer severe economic impacts in the future due to water shortages during the next, inevitable drought.

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202/434-4760
FAX 202/434-4763

From long experience, we can tell you that it is not easy to replace lost water supplies. Even if we were ready to break ground today on a new water storage reservoir, it could take 10 years or more to build it and many more years to fill it.

This past history has made us wary of regulatory proceedings that encompass existing water supplies. We simply cannot afford to lose any more of our water.

The precarious state of our current situation is apparent when examining the State Water Project. Last year we had our first dry year after five consecutive wet years. Lake Oroville is the main storage reservoir for the State Water Project, and its watershed received only about half its normal rainfall and snowmelt—one of the driest in California. The impacts were immediately felt. State Water Project customers were provided only 39 percent of their water supply requests.

The state's energy crisis compounded these water shortages, further increasing the unit cost of water. As you work your way through the issues you must weigh in renewing the license for the hydropower facilities, you need to understand that the actions you take will have significant impacts on most of California and most Californians.

G-03-01

Our vision for a successful relicensing is one that results in retaining the important water and power benefits the Oroville Facilities provide to the state.

G-03-02



November 26, 2001

Mr. Len Marino,
California Department of Water Resources
State Water Project Analysis Office
1416 Ninth Street
PO Box 942836
Sacramento, CA 94236-0001

Mr. Len Marino,

In my capacity as an Operations Engineer with the California Independent System Operator, I provide daily engineering support to the real-time operation of the electric transmission system in Northern California, including that of the Oroville Complex, commonly referred to as “Hyatt-Thermalito”. I am also a member of the Sacramento Valley Study Group, whose goal is to identify and encourage operating practices that will ensure reliable electric transmission system operation in the Sacramento Valley.

The ISO recognizes Hyatt-Thermalito Complex as a significant contributor to the overall supply-reliability of electricity and it plays a very important role in the daily operations of the electric transmission system.

Please bear in mind that the ISO controlled grid is part of a vast interconnected system, including electrical ties to the rest of the Western United States and Canada, as well as ties to the hydroelectric pump-generators at Hyatt-Thermalito. Undoubtedly, significant operational difficulties presently exist within the ISO controlled grid. These difficulties are the effects of insufficient generating capacity throughout the state, and other grid reliability concerns such as voltage stability and equipment overloads. The Complex helps the ISO manage these kinds of problems.

G-04-01

The Hyatt-Thermalito Complex is capable of generating more than 900 MW, representing a substantial contribution to electrical supply reliability throughout California. This magnitude of power is capable of serving well over 500,000 households, business and public facilities. Without the generating resources contributed by the Hyatt-Thermalito Complex, California is considerably more vulnerable to additional supply shortages. The generating facilities at the Oroville Complex have also provided the ISO a variety of ancillary services required to operate the grid reliably. Those services include frequency regulation, voltage support, operating reserve capacity, and supplemental energy. The Hyatt-Thermalito complex is an especially unique and valuable resource in that it is capable of fast response to electric demand changes and furthermore, it is capable of recycling it's energy – by pumping water back upstream to improve operational flexibility and provide generation capacity during times of high power demand.

The ISO looks forward to sustained generating capacity during the FERC re-licensing of the Oroville Complex; both for the energy it supplies to California and the additional reliability benefits it provides to the ISO Grid. Upon re-licensing, this pump-generator complex would be depended upon to continue to help mitigate these electric system operational issues and remain standing as a basic infrastructure elements for a reliable Northern California electric system. Please feel free to contact me at (916) 608-5835 if you have any questions. Thank you.

G-04-02

Sincerely,

Wilson Head

Created by: Wilson Head

CAISO
151 Blue Ravine Road
Folsom, California 95630
(916) 351-4400

LAST UPDATE: 11/26/01

Page 2

Self - team

William
transcript of
speech delivered
at 10/29/21 Oroville
→ Send to Togra
transcript of Oro
ville 10/29/21

Introduce : Ray Bell, MD Short, Floyd Higgins, -Self

representing the OROVILLE FOUNDATION OF FLIGHT,

affiliated with the Oroville Chapter of the EXPERIMENTAL
AIRCRAFT ASSOCIATION. Your EAA group of citizens.

Our Chapter and Foundation meet monthly and participate in
events as well as learning and teaching various aspects of general
aviation to young and old citizens at our Vinyl Briefing Hut
adjacent to the Golf Course on the Oroville Airport property.
Where the public is always invited and welcome, especially during
our monthly fly-in breakfast's
held on the third Saturday of each month.

Our mission here in the Oroville area is to bring awareness, and
the joy of flight to the young and old alike, and to promote a better
understanding of aviation in general. Along with that we would
like to ask that in the future general aviation will be allowed to
expand and grow, on land as well as on the abundant waterways
we have to offer here around Oroville. Specifically - a year around
base to accomodate Seaplanes at the Afterbay waterway.

G-05-01

To begin with, I would like to bring up a factor that should be
considered in the choosing of a Seaplane base here in Oroville.
Presently, there does not exist any Seaplane base between San
Francisco and Portland, Oregon. Float planes must refuel at
general boating marinas, mixing with boat traffic, maneuvering
around upright signs and fuel dock pumps, as well as being offered
low octane fuel instead of high octane aircraft fuel. Seaplanes
could contact the local Flight Base Operator by radio while inflight
and arrange for dockside fuel delivery during their flights in and

through this area if we could establish a Seaplane base here at the Oroville afterbay adjacent to our airport.

Over the past three years, during our aircraft events, such as the Starduster biplane Open house fly-in and presenting the B-17 Bomber "The Aluminum Overcast", we have accomodated float planes for the public to enjoy also.

We have found that the site we have chosen is relatively clear of heavy boat traffic, has a relatively low count of wildlife to disturb, and meets all FAA requirements in size, depth, approach and departure pathways.

The addition of a Seaplane facility here in Oroville should bring about about aviation events and encourage the development of float plane activities and public participation in watercraft use and ownership here in Oroville

*W/D has brought a float plane business and float
apparatus down in lobby*

Have folder w/ aerial photo's

*Comments and requirements taken from
Seaplane Pilots Association web site -
explains environmental impact studies*

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October 30, 2001

Mr. Len Marino
Department of Water Resources
State Water Project Analysis
1416 Ninth Street
P.O. Box 942836
Sacramento, California 94236-0001

RE: FERC Project No. 2100, Oroville Hydropower Facilities

Dear Mr. Marino:

This is the Statement by Geoffrey Vanden Heuvel, Southern California Water Committee for the FERC Scoping/October 30, 2001.

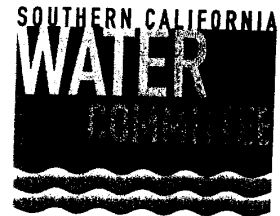
My name is Geoffrey Vanden Heuvel and I am presenting testimony regarding the relicensing of the Oroville Hydropower Facilities on behalf of the Southern California Water Committee. The Southern California Water Committee is a non-profit, non-partisan educational organization dedicated to ensuring that California has sufficient water supplies to support a strong economy and growing population.

The SCWC is a powerful voice for Southern California because it reflects a broad consensus on water issues.

The Committee is composed of leaders from business, government, agriculture and water agencies in Los Angeles, Orange, San Diego, San Bernardino, Imperial, Riverside, Ventura and Kern Counties. For example, our members include UNOCAL, Anheuser-Busch, Pacific Telesis Group, the Procter & Gamble Paper Products Company, The Ralphs/Food 4 Less, The Gas Company, Sunkist Growers, Hines Nurseries and over 40 cities and their city councils. We are an independent advocate for Southern California's water interests. Water is our sole interest.

As an organization, we have been actively engaged in the CalFed Bay-Delta Program and the 4.4 Plan for the Colorado River. Strong leadership and the collective expertise of our members allow the Water Committee to contribute ample resources and viable strategies towards resolving these statewide efforts.

Southern California has undergone a dramatic shift over the past decade in how our water supplies are managed. Our large urban areas are essentially getting by on the same amounts of water they used 10 years ago, despite sizeable population increases. We are able to do that in part thanks to extraordinary levels of water conservation and water recycling. We are a national leader in water use efficiency.



10184 Sixth Street ~ Suite C

Rancho Cucamonga, CA 91730

Phone (909) 980-4700

Fax (909) 980-2628

www.socalwater.org

October 30, 2001
Mr. Len Marino
Department of Water Resources
Page Two

We have also seen increased regional efforts to maximize local water resources so that we can be assured of having necessary water supplies in the inevitable dry years. Nonetheless, the region's water future is not completely assured. We face challenges in meeting the requirement to reduce our dependence on the Colorado River. The State Water Project's supply reliability is in part contingent on continued progress in implementing the CalFed solution.

Overall planning efforts to meet our expected future water needs are predicated in part on certain levels of water supply reliability from the State Water Project. Project water is important not only to meet immediate supplemental supply needs but to allow us to meet water quality goals by blending with Colorado River supplies.

Southern California has already lost significant water supplies under the Bay-Delta Accord and other regulatory actions. We have not seen any of the new supplies promised under the CalFed program. We cannot afford to further reduce the amount of supplemental water necessary to support Southern California's economy and population.

G-06-01

Our goal for the relicensing of the Oroville Hydropower facilities is to maintain the level of benefits we receive from the water stored at the reservoir, and to continue to use Project-generated power to help offset the cost of that water.

G-06-02

Southern California has invested billions of dollars in the State Water Project, including the Oroville facilities. That is an investment we need to protect.

The Southern California Water Committee appreciates the opportunity to comment on relicensing of the Oroville Hydropower Facilities.

Very truly yours,


Joan Anderson Dym
Executive Director

SOUTHERN CALIFORNIA

COMMITTEE
INCORPORATED

A cooperative effort of business, government, water agencies, agriculture, and public interests.

Statement of the Southern California Water Committee
Before the Federal Energy Regulatory Commission
Given on October 30, 2001
By Geoffrey Vanden Heuvel, Secretary

RE: FERC Project No. 2100, Oroville Hydropower Facilities

My name is Geoffrey Vanden Heuvel and I am presenting testimony regarding the re-licensing of the Oroville Hydropower Facilities on behalf of the Southern California Water Committee. The Southern California Water Committee is a non-profit, non-partisan educational organization dedicated to ensuring that California has sufficient water supplies to support a strong economy and growing population. The SCWC is a powerful voice for Southern California because it reflects a broad consensus on water issues. The Committee is composed of leaders from business, government, agriculture and water agencies in Los Angeles, Orange, San Diego, San Bernardino, Imperial, Riverside, Ventura and Kern Counties. For example, our members include UNOCAL, Anheuser-Busch, Pacific Telesis Group, Proctor & Gamble Co., Ralph's/Food 4 Less, The Gas Company, Sunkist Growers, Hines Nurseries, the Building Industry Association of Southern California and over 40 cities and their city councils. Water is our sole interest. We are an independent advocate for Southern California's water interests. As an organization, we have been actively engaged in the CalFed Bay-Delta Program and the 4.4 Plan for the Colorado River. Strong leadership and the collective expertise of our members allow the Water Committee to contribute ample resources and viable strategies towards resolving these statewide efforts.

Southern California has undergone a dramatic shift over the past decade in how our water supplies are managed. Our large urban areas are essentially getting by on the same amounts of water they used 10 years ago, despite sizeable population increases. We are able to do that in part thanks to extraordinary levels of water conservation and water recycling. We are a national leader in water use efficiency. We have also seen increased regional efforts to maximize local water resources so that we can be assured of having necessary water supplies in the inevitable dry years.

SCWC Testimony
October 30, 2001
FERC Hearing

Nonetheless, the region's water future is not completely assured. We face challenges in meeting the requirement to reduce our dependence on the Colorado River. The State Water Project's supply reliability is in part contingent on continued progress in implementing the CalFed solution. Overall planning efforts to meet our expected future water needs are predicated in part on certain levels of water supply reliability from the State Water Project. Project water is important not only to meet immediate supplemental supply needs but also to allow us to meet water quality goals by blending with Colorado River supplies.

Southern California has already lost significant water supplies under the Bay-Delta Accord and other regulatory actions. We have not seen any of the new supplies promised under the CalFed program. We cannot afford to further reduce the amount of supplemental water necessary to support Southern California's economy and population.

G-07-01

Our goal for the re-licensing of the Oroville Hydropower facilities is to maintain the level of benefits we receive from the water stored at the reservoir, and to continue to use Project-generated power to help offset the cost of that water. Southern California has invested billions of dollars in the State Water Project, including the Oroville facilities. That is an investment we need to protect.

G-07-02

From: Lanny H. Fisk [mailto:fiskla1@hotmail.com]
Sent: Monday, November 26, 2001 12:57 PM
To: orovillep2100@water.ca.gov
Cc: Eric@paleoresource.com; Lanny@paleoresource.com; Jill@paleoresource.com
Subject: Oroville Facilities Relicensing -- Paleontological Resources Need to be Assessed

Monday 26 November 2001

Mr. Len Marino,

The purpose of this e-mail message is to respond to the request to identify the scope of important environmental resources affected by the Oroville Facilities. I have examined the Draft NEPA Scoping Document 1 and CEQA Notice of Preparation and was surprised to see that Paleontological Resources (fossils -- the remains of prehistoric plants and animals) are not included as an issue to be addressed in the environmental assessment. Both NEPA and CEQA require that paleontological resources be considered in environmental impact assessments/statements/reports. In my professional opinion, in order to conduct an accurate and thorough analysis of direct, indirect, and cumulative effects of the Oroville facilities, impacts on paleontological resources need to be considered in any environmental assessments required by the relicensing. I am already aware of several significant paleontological resource sites on properties included within the Oroville Project Boundary.

Like for Cultural Resources Issues, the Oroville Facilities Relicensing environmental assessment should include, but not be limited to, the following:

PR1: Determine the nature, distribution, and value of paleontological resources (fossils) within the Area of Potential Effects (APE). ☐ G-08-01

PR2: Evaluate the need and methods to provide protection of paleontological resources within the APE. ☐ G-08-02

PR3: Determine the effects of existing and future project facilities, operations, and maintenance on paleontological resources with the APE. ☐ G-08-03

PR4: Provide for the interpretation of paleontological resources and make available paleontological resources data relative to the Oroville project area. ☐ G-08-04

Additional paleontological resource issues may need to be addressed once an initial survey of paleontological resources within the APE has been completed. ☐ G-08-05

As a professional paleontologist who specializes in surveying and assessing the potential impacts of large construction projects (highways, pipelines, landfills, power plants, etc.) on paleontological resources, I would be very interested in working with you on paleontological resource issues related to the Oroville Facilities Relicensing.

Thank you for considering my input into the scoping process.

Dr. Lanny H. Fisk, PhD, RG
PaleoResource Consultants
F & F GeoResource Associates, Inc.
5325 Elkhorn Boulevard, #294
Sacramento, CA 95842
Office Phone: 916-339-9594
Cell Phone: 916-947-9594
Office Fax: 916-332-9239

F. D. Pursell, Civil Engineering Services, 220 Hillcrest Ave., Oroville, CA 95966 (530) 589-3123

November 16, 2001
Oroville, CA 95966

Mr. Len Marino
California Department of Water Resources
State Water Project Analysis Office
1416 Ninth Street
P. O. Box 942836
Sacramento, CA 94236-0001

Subject: Oroville Facilities Relicensing - Comment submittal

Dear Sir:

I wish to submit the following comments for inclusion in the Scoping Document for the subject relicensing.

My concerns involve the volume of traffic which the Lake Oroville Facilities generates and the routes by which users have access.

I note from page 207 of the IPP that a large portion of total visitors to the project would most likely use State Highway 162 to arrive at their destinations which include Bidwell Canyon, Loafer Creek, Stringtown, Enterprise and Foreman Creek. In addition, a considerable number would also utilize Hwy 162 to get to Spillway. I live near these routes and am familiar with the visitor traffic and the under-utilization of the alternate routes proposed below.

I enclose a map showing alternate routes to these locations which routes would help alleviate congestion on Hwy 162. Observe that:

- 1- Spillway visitors from the north could use Garden Drive, Nelson Ave. or Montgomery St. offramps to Oro Dam Blvd. along the river for direct access.
- 2- Spillway visitors from the south could use Hwy 162 - Oro Dam Blvd. along the river.
- 3- All other above mentioned destinations could also be reached from the north via Hwy 162 alone.
- 4- The same destinations as in 3- above could be reached from the south via Ophir Rd., Wyandotte Rd. and Miner's Ranch Rd. to Hwy 162, thence to the various final locations.

Some of these routes avoid places of business which visitors may choose to frequent and therefor would find alternate routes inadvisable. Those wishing to go direct may find the alternates preferable. Use of alternate routes could have significant effect on use of Hwy 162, an increasingly heavily used arterial under normal conditions from local traffic alone.

G-09-01

I request that DWR study the aspect of access to the Project and coordinate with Caltrans and Butte County Public Works Departments to make best utilization of available routes for maximum reduction of impact on Hwy 162. At the very least, the Relicensing effort should include thorough signing on all alternate routes and an organized effort to inform and encourage the visitors with their options for access.

G-09-02

G-09-03

I am informed that the Recreation Working Group is the most applicable forum in which I should pursue recognition of this matter, as there is a study of vehicular access within their scope. I plan to attend the December 6th meeting of that group. I am interested in use of Hwy 162 as it relates to local development, as well, and hope to contribute to Oroville's obligations thereto.

Thank you for your consideration of this request.

Very truly yours,



F. D. Pursell, P. E.

Enclosure:

STATE OF CALIFORNIA
ELECTRICITY OVERSIGHT BOARD



Gray Davis, Governor

October 30, 2001

Mr. Len Marino
Department of Water Resources
State Water Project Analysis Office
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001

Re: Oroville Facilities Relicensing

Dear Mr. Marino:

The California Electricity Oversight Board (EOB) takes this opportunity to express its opinion regarding the electrical value of continued operation of the Oroville Facilities.

The California Department of Water Resources (CDWR) operates the Oroville Facilities as part of the State Water Project (SWP). The CDWR operates the SWP to maximize on-peak generation and off-peak water pumping, allowing CDWR to market surplus generation. The CDWR enters into a variety of bilateral arrangements to market surplus on-peak as well as off-peak generation from the SWP power system, including the Oroville Facilities. The CDWR sells the surplus energy to the California Independent System Operator Corporation (CAISO) and to the energy-purchasing arm of the CDWR (the California Energy Resources Scheduling division). The Oroville Facilities contribute to the ancillary services that the CDWR sells into CAISO's ancillary services market and, pursuant to contract, Southern California Edison (SCE) receives a portion of the ancillary services provided by the Oroville Facilities.

Overall, the EOB underscores the important electric contribution of the Oroville Facilities including the provision of ancillary services needed to maintain overall grid reliability.

S-01-01

Sincerely,

A handwritten signature in cursive script that reads "Lisa V. Wolfe".

Lisa V. Wolfe
Staff Counsel
California Electricity Oversight Board



Winston H. Hickox
Secretary for
Environmental
Protection

State Water Resources Control Board

Division of Water Rights

1001 I Street, 14th Floor • Sacramento, California 95814 • (916) 341-5363
Mailing Address: P.O. Box 2000 • Sacramento, California • 95812-2000
FAX (916) 341-5400 • Web Site Address: <http://www.waterrights.ca.gov>



Gray Davis
Governor

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.
For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>.*

NOV 21 2001

Mr. David P. Boergers
Office of the Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, D.C. 20426

Dear Mr. Boergers:

COMMENTS BY THE STATE WATER RESOURCES CONTROL BOARD ON DRAFT NEPA SCOPING DOCUMENT 1 AND CEQA NOTICE OF PREPARATION FOR RELICENSING OF THE OROVILLE FACILITIES (FERC LICENSE NO. 2100)

The State Water Resources Control Board (SWRCB) has received the document titled Draft NEPA Scoping Document 1 and CEQA Notice of Preparation (SD1) for Oroville Facilities Relicensing. This document, prepared and circulated by the current licensee, Department of Water Resources (DWR), solicits comments from federal, state and local resource agencies, and all other interested parties, regarding environmental issues related to the Federal Energy Regulatory Commission (FERC) relicensing of the Oroville Facilities (FERC No. 2100) hydroelectric project. Issues identified will be used to develop a study regime that is expected to gather resource data adequate for the preparation of environmental documents to be used for compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). SWRCB staff respectfully submits comments to assist DWR and the FERC in this environmental assessment process.

The SWRCB is the agency charged with implementing the Clean Water Act (33 USC §§1251-1387) (CWA) in the state of California. Water quality certification under Section 401 of the CWA (33 USC §1341) may be issued if the SWRCB determines that there is reasonable assurance that the activity is consistent with federal and state water quality standards. The design and operation of the Oroville project must meet water quality objectives as defined in the Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board, Central Valley Region. Conditions resulting from controllable factors must protect the Basin Plan's designated beneficial uses for all water bodies affected by the hydroelectric element of the project. Issuance of a 401 Certification is a discretionary act and is therefore subject to CEQA. A NEPA/CEQA environmental document that adequately addresses the needs of the SWRCB is necessary to support any Section 401 Certification issued.

S-02-01

General Comments

DWR has elected to use the Alternative Licensing Process (18 CFR § 4.34) (ALP) in the relicensing of FERC Project No. 2100. Broad participation in this collaborative effort has provided a productive forum for informal scoping of issues related to the project. Through the collaborative process, various federal, state, and local resource agency representatives and other interested parties have helped the Licensee to develop an initial set of resource issues and concerns, presented in the SD1 as Appendix B. This list provides a comprehensive look at issues and concerns associated with the project. SWRCB staff recommends that all issues in Appendix B be addressed if the ALP collaborative team is to effectively analyze the effects of current project operation on attributes of the Feather River system and locale.

S-02-02

SWRCB staff has been active in the Oroville ALP and does recognize that considerable progress has been made toward identifying and addressing resource issues as the collaborative team moves into the study plan development phase of this process. During the initial phase of issue exploration, SWRCB staff presented to the Environmental Workgroup a preliminary statement of resource concerns which included general concerns and examples of the types of issues that must be addressed prior to decision-making by the SWRCB on license conditioning and issuance of a water quality certification for the Oroville Project relicensing (Attachment). As an active participant in the Oroville ALP, SWRCB staff continues to provide assistance to the collaborative group on data needs for evaluating project compliance with the CWA and for the successful issuance of a CWA Section 401 water quality certification.

The SD1 is intended to initiate both the NEPA and the CEQA process, but language in this document is vague as to the approach that will be taken by DWR to meet Lead Agency requirements under CEQA. CEQA Guidelines encourage the preparation of joint federal and state environmental documents (Title 14, CCR §15222 and §15226) or the reuse of existing federal documents (Title 14, CCR §15221). However, as the state Lead Agency, DWR may elect to prepare an independent CEQA environmental document. The SD1 states that DWR intends to meet CEQA requirements through issuance of an Environmental Impact Report, but it is unclear if a joint document will be prepared, if parallel CEQA and NEPA paths will be followed, or if the Licensee plans to use a final NEPA document from FERC. The Scoping Document 2 (SD2) should clearly disclose how CEQA compliance will be met.

S-02-03

SWRCB staff has, on several occasions, voiced concern for the scheduling of formal NEPA/CEQA scoping so early in this ALP. Through the collaborative forum, the Licensee has enjoyed a substantial level of informal public and resource agency input, leading to the development of issue sheets that provide the framework for study plans. By postponing the formal scoping process until a date beyond the collection and analysis of data from a first field season, the collaborative team and other commenters to this SD1 could have benefited from information gathered on some of the existing issue questions. It is understood by workgroup and plenary group members that data collected from resource studies may demonstrate the need for additional investigation. Additional study needs could take the form of either a more focused or

NOV 21 2001

expanded scope (temporal or geographic) of investigation on recognized issues, or as initial study data is analyzed, new issues could be identified. Although both informal and formal scoping of issues have been conducted early in this relicensing process, the collaborative team must remain aware that familiarity with the project and its effects on resources may generate additional resource concerns that need to be addressed later in this process.

S-02-04

The Applicant Prepared Environmental Assessment (APEA) and the CEQA document must provide data to support a conclusion that project features and operation are protective of the beneficial uses designated for project-affected waters. Beneficial uses designated specifically for Lake Oroville and the Feather River immediately downstream of the facility include: Municipal and domestic supply, irrigation, power generation, contact and non-contact recreation, cold freshwater habitat, warm freshwater habitat, aquatic migration, cold water spawning habitat, warm water spawning habitat, and wildlife habitat.

S-02-05

The SD1 remains silent on the Licensee's intent to identify and implement recreation-based interim projects prior to any negotiated settlement that the collaborative team may develop. It is understood that interim project(s) approved and constructed before settlement agreement is reached will be banked as credits toward the Licensee's total obligation for recreation-related Protection, Mitigation and Enhancement measures (PM&Es) identified in any license application or APEA filed with the FERC. Interim projects are subject to environmental review just the same as all other project-affected resources and PM&Es developed for this relicensing effort will be. A complete SD2 should fully disclose the Interim Measures philosophy, a list of recreation issues addressed, and the process that will be followed to select, implement, and incorporate them into the NEPA and CEQA environmental filing package(s).

S-02-06

Specific Comments

Preliminary resource issues and concerns were presented by SWRCB staff at the January 23, 2001 Environmental Workgroup meeting (see Attachment). Collection of data adequate to answer these issue questions is critical to the SWRCB's evaluation of project effects on the designated beneficial uses of Lake Oroville and Feather River waters. Resource studies should be designed and conducted to provide the collaborative team the information necessary to present discussion of these issues in the APEA and to develop PM&Es or project alternatives as appropriate.

S-02-07

In addition, SWRCB staff recommends that the following concerns be addressed in both the NEPA and CEQA documents:

Water Quality

The Feather River, from the fish barrier dam downstream to the Sacramento River, has designated beneficial uses that include cold freshwater habitat, migration and spawning. Delivery of water at temperatures adequate to protect all life stages of the cold water species holding, spawning and rearing in this river reach is critical. Water temperature studies should be

S-02-08

NOV 21 2007

designed to include a minimum of three years of thermographic data collection in an attempt to provide representation of various water year types. To adequately assess the controllable factors associated with achieving cold water temperatures downstream of the project, analysis should include not only the predictive modeling of various operating scenarios of the temperature control intake structure but also the potential management of cold water releases from the dam's existing low-level outlet.

S-02-08

Recreational Opportunities

Waters within the project boundaries have Basin Plan use designations that include both contact and non-contact recreation. Swimming, flat water boating, angling, camping and various other recreational uses are provided on Lake Oroville, Thermalito Forebay, Thermalito Afterbay and other surface waters of the project. Although project features provide tremendous opportunity for the fore-mentioned recreational uses, opportunities for whitewater recreation in the project area should also be considered. A feasibility study should be conducted to determine potential whitewater uses that could be achieved by utilizing natural or controlled flows upstream and downstream of the project features.

S-02-09

The collaborative team has identified various recreation-related projects which could be implemented as Interim Projects, prior to developing final PM&Es and reaching settlement among the participants. Any Interim Project selected and implemented will be recognized as a recreational PM&E under the settlement agreement. Information is needed to determine whether any of the proposed interim projects are actually outstanding responsibilities under the existing license. As stated in the SWRCB's list of preliminary concerns, the Licensee should provide a complete inventory of recreational mitigation obligations required by Articles of the existing FERC License, and should clearly disclose the current status of compliance with those measures. This inventory is paramount in differentiating between existing commitments and those desired conditions which will be considered during future negotiated PM&Es.

S-02-10

Aquatic Biota

The Oroville Wildlife Area supports numerous aquatic plant and animal species. This multiple use area also provides opportunities for various forms of recreation including camping, wildlife viewing, hunting, and shooting. Potential impacts on aquatic biota, associated with each of these recreational demands should be thoroughly evaluated. Inventories of sensitive plant, amphibian, and avian species should be conducted and risk factors to individuals and populations determined for future management decisions.

S-02-11

Alternative

The Thermalito Complex within the Oroville Facilities boundary was designed in part, as a warming basin for agricultural waters to be delivered to farmland east of the Afterbay. In addition, discharges to the Feather River are metered through the Afterbay Outlet to augment flow in the natural channel downstream of the project. The cold freshwater habitat downstream

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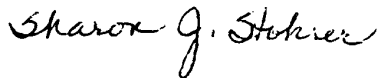
of this point has the potential to be compromised by mixing of warm water from the Afterbay with the cold discharges to the channel from Oroville Dam.

SWRCB staff recommends that an alternative to the proposed action be explored. This alternative should consider the benefits and trade-offs that would occur with re-operation of the water delivery system through the Thermalito Afterbay. This alternative should include a feasibility analysis on various engineering options for providing separate sources of water for delivery to agricultural diversions and for downstream salmonid water temperature needs.

S-02-12

SWRCB staff appreciates the opportunity to comment on this SD1. Staff looks forward to working with FERC and DWR to help protect the beneficial uses of waters in the Feather River and Lake Oroville in the relicensing process for the Oroville Facilities. If you have questions regarding these comments or SWRCB participation in the Oroville ALP, please contact me at (916) 341-5397 or e-mail: sstohrer@waterrights.swrcb.ca.gov, or you may contact Jim Canaday, FERC Team Leader at (916) 341-5308.

Sincerely,



Sharon J. Stohrer
Environmental Scientist

cc: Mr. Len Marino
Department of Water Resources
State Water Project Analysis Office
P.O. Box 942836
Sacramento, CA 94236-0001

Mr. James Fargo
Federal Energy Regulatory Commission
e-mail: james.fargo@ferc.fed.us

Mr. Henry Ramirez
Department of Water Resources
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001

(Continued next page.)

NOV 21 2001

Mr. David P. Boergers

6

cc: (Continuation page.)

Ms. Stacy Matthews
Regional Water Quality Control Board
415 Knollcrest Drive
Redding, CA 96002

Mr. Mike Meinz
Department of Fish and Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Mr. Michael Morse
U.S. Fish and Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

Mr. Steve Edmondson
National Marine Fisheries Services
777 Sonoma Avenue, Room 325
Santa Rosa, CA 95404

Mr. Harry Williamson
National Park Service
CA Hydro Program
801 I Street, Room 156-B
Sacramento, CA 95814

Mr. Chuck Bonham
Trout Unlimited
828 San Pablo Avenue, Suite 208
Albany, CA 94706

Mr. Richard Roos-Collins
Natural Heritage Institute
2140 Shattuck Avenue, #500
Berkeley, CA 94704

DEPARTMENT OF FISH AND GAME

Sacramento Valley and Central Sierra Region
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CALIFORNIA 95670
Telephone (916) 358-2900



November 21, 2001

Mr. David P. Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Dear Mr. Boergers:

**COMMENTS BY THE CALIFORNIA DEPARTMENT OF FISH AND GAME ON THE
DRAFT NEPA SCOPING DOCUMENT 1 AND CEQA NOTICE OF PREPARATION,
OROVILLE FACILITIES RELICENSING, FERC PROJECT NO. 2100-116**

The California Department of Fish and Game (DFG) has reviewed the Draft NEPA Scoping Document 1 and CEQA Notice of Preparation for the relicensing of the Oroville Project, FERC Project No. 2100 circulated on September 27, 2001. DFG staff has been involved in the Oroville Alternate Licensing Process (ALP) since its inception on June 29, 2000. We have participated in all levels of the process: Plenary Group, Work Groups and Task Forces. DFG is very appreciative of Department of Water Resource (DWR) efforts to address fairly all relicensing concerns expressed by agencies and citizens. However, the process has become overwhelming. The number of relicensing concerns (issue statements) and the volume and complexity of study plans is making it difficult for DFG to track our concerns. Therefore, we are resubmitting the list of relicensing concerns which originally were submitted in a letter to Mr. Henry M. Ramirez, Chief, Project Power Planning Branch on February 16, 2001 (February 16, 2001 letter enclosed). Those concerns address the protection of public trust resources associated with Lake Oroville, with the Feather River downstream of Lake Oroville, and include the operation of the Feather River Mitigation Hatchery and management of the Oroville Wildlife Area.

One DFG relicensing issue that appears to have been lost is our concern for funding of the Oroville Wildlife Area Wild Area (OWA). Under a 1968 agreement between the Department of Water Resources and DFG, the OWA was established for the purpose of creating and maintaining a public fish and wildlife management area. Prior to the construction of Oroville Dam, the State acquired title to the borrow area (OWA) under provisions of the Davis-Dolwig Act (Water Resource Development Bond Act), Sections 11900-11925 of the Water Code, for the purpose of creating and maintaining a public fish and wildlife management area and providing for associated recreation, and pursuant to Section 11575 et seq. of the Water Code for the purpose of the water project as defined in Sections 11100 et seq. and 12930 et seq. of the Water Code. Under the Davis-Dolwig Act, it is the policy of this State that recreation and

☐ S-03-01

enhancement of fish and wildlife resources are among the purposes of the state water project (Section 11900), that acquisition of real property for such purposes be planned (Section 11900), and that continued funding for operation and maintenance of such fish and wildlife recreation features be provided (Section 11901). However, to date no funding as authorized under the Davis-Dolwig Act has been provided for operation and maintenance at the OWA. Funding for the operation and maintenance of the OWA has come entirely from the Fish and Wildlife Preservation Fund (Hunting Licence Fees) and from various state and federal allocations. Annual funding now received is only sufficient to cover O&M costs associated with the heavy recreational use. Under existing funding, DFG is unable to manage, create or enhance the wildlife habitat as expected when the OWA was established. Therefore, the DFG respectfully resubmits our request that the Oroville Facilities ALP address the need for additional funding for operation of the OWA (July 2, 2001 memo enclosed).

S-03-02

Other comments on the Draft NEPA Scoping Document 1 and CEQA Notice of Preparation for the relicensing of the Oroville Project, FERC Project No. 2100 are as follows:

Page v and Page 1: Executive Summary and Introduction states that the Oroville Facilities operate under a license issued by the Federal Energy Regulatory Commission. The final scoping document should define if the term "facility" refers to just the hydropower operation or to the entire Oroville/State Water Project complex.

S-03-03

Page 3: Figure 1, Highway 99 between Yuba City and Chico is labeled Highway 70.

S-03-04

Page 5: The ALP process offers the public more than three formal comment opportunities. Formal opportunities to comment will also occur after the SD2 is published and during the State Water Resources Control Board's 401 Certification Process.

S-03-05

Page 20: The Department of Water Resources (DWR) should not eliminate "project retirement or issuance of a non-power license" from its range of alternatives considered in the environmental analysis. On page 20 of SD1, DWR states that they are not going to consider "project retirement or issuance of a non-power license" in their evaluation of project alternatives. Although DFG is not suggesting that any specific component of the project should be decommissioned, it is not appropriate for DWR to eliminate this alternative prior to a thorough evaluation of the beneficial or adverse effects of the project. The Federal Energy Regulatory Commission's "Guidelines for Preparing Environmental Assessments" provides detailed information on evaluating project retirement as a relicensing alternative.

S-03-06

Resources Issues-Appendix B: If upstream fish passage facilities are

S-03-07

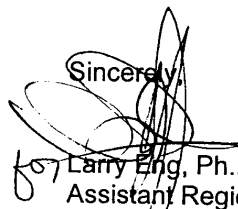
evaluated at project structures, then DWR should also investigate fish screens and other facilities that provide downstream passage. For example, if the Fish Barrier Dam and the Thermalito Diversion Dam are equipped with fish ladders, then fish screens may be needed at the intake for the Thermalito Diversion Dam powerhouse and along the Power Canal.

S-03-07

Resources Issues-Appendix B: In its evaluation of operational and engineering alternatives to meet downstream temperature requirements (as identified in Issue Statement E12), DWR should consider alternatives that would allow cooler waters from Lake Oroville to be directed to the Low Flow Channel while warmer waters are directed to the Thermalito Forebay.

S-03-08

Thank you for your consideration. If you have questions about our comments, please contact Mike Meinz, Staff Environmental Scientist, at (916) 358-2853 or mmeinz@dfg.ca.gov.

Sincerely,

for Larry Eng, Ph.D.
Assistant Regional Manager
Fisheries, Wildlife and Environmental
Programs

Enclosures:

cc: Mr. Len Marino
Department of Water Resources
1416 Ninth Street
P.O. Box 94826
Sacramento, CA 94236-0001

Mr. Henry Ramirez
California Department of Water Resources
P.O. Box 942836
Sacramento, Ca 94236-0001

Mr. James Fargo
Federal Energy Regulatory Commission
Office of Hydropower Licensing

888 First Street, N.E.
Washington, D.C. 20426

Mr. Gary Taylor
c/o Michael Morse
U. S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento, CA 95825-1846

Mr. Mark Madrid
Forest Supervisor
Plumas National Forest
P.O. Box 11500
Quincy, CA 95971

Mr. Mike Taylor
Plumas National Forest
Feather River Ranger District
875 Mitchell Avenue
Oroville, Ca 95965-4699

Mr. Harry M. Schueller
c/o Jim Canaday
State Water Resources Control
P.O. Box 2000
Sacramento, CA 95812-2000

Ms. Sharon Stohrer
State Water Resources Control
P.O. Box 2000
Sacramento, CA 95812-2000

DEPARTMENT OF FISH AND GAME

SACRAMENTO VALLEY AND CENTRAL SIERRA
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CALIFORNIA 95670
Telephone (916) 358-2900



February 16, 2001

Mr. Henry M. Ramirez, Chief
Project Power Planning Branch
State Water Project Analysis Office
Department of Water Resources
1416 Ninth Street
Post Office Box 942836
Sacramento, California 95814

Dear Mr. Ramirez:

Oroville Project (Feather River Project) No. 2100

As requested by the Department of Water Resource at the December 7, 2000 meeting of the Environmental Work Group, the California Department of Fish and Game formally submits our concerns and a directory of our authorities relative to the relicensing of the Oroville Project, FERC No. 2100 (enclosed).

Thank you for soliciting our concerns. If you have questions about the above, please contact Mr. Mike Mainz, Environmental Services IV, at (916) 358-2853 or mmeinz@dfg.ca.gov.

Sincerely,

Larry L. Eng, Ph.D.
Assistant Regional Manager
Fisheries, Wildlife and Environmental Programs

Enclosures

cc: Mr. Mike Mainz
Department of Fish and Game
1701 Nimbus Road, Suite A
Rancho Cordova, California 95670

Mr. Ranirez
February 16, 2001
Page Two

Mr. David Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street N. E.
Washington D. C. 20426

**California Department of Fish and Game
Relicensing Concerns - Oroville Project
FERC No. 2100**

The California Department of Fish and Game (DFG) have identified several broad areas of concern relative to the Relicensing of the Oroville Project. Those concerns are directed toward the protection of public trust resources associated with Lake Oroville, with the Feather River downstream of Lake Oroville, and include the operation of the Feather River Mitigation Hatchery and management of the Oroville Wildlife Area.

DFG respectfully requests that the California Department of Water Resources (DWR) application to the Federal Energy Regulatory Commission (FERC) for relicensing of the Oroville Project address the areas of concern outlined below. Our request is made under provisions of the Federal Power Act [Sections 10(a) and 100], the Federal Fish and Wildlife Coordinate Act, and Section 21000 [Title 14] of the California Public Resources Code. Section 21000 designates DFG trustee for California's fish and wildlife resources and gives DFG jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species.

Our areas of concern include but may not be limited to the following:

Reservoir Surface Level Fluctuation

- Are the project related Lake Oroville water level fluctuations presently affecting the reproduction and survival of warmwater sportfish? S-03a-01
- How will the project related Lake Oroville water level fluctuations affect the reproduction and survival of warmwater sportfish under future operational demands? S-03a-02
- Is the present minimum pool adequate for protecting the Lake Oroville cold- water sport fishery? S-03a-03

Water Temperature

- Are the existing temperature requirements defined under the State Water Projects Feather River Flow Constraints being met and are they adequately protecting steelhead and fall, late-fall, and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay outlet? S-03a-04a
- S-03a-04b

- Is the availability of a cold-water pool in Lake Oroville adequate under present and future operational demands to meet the existing downstream present and future operational demands to cold freshwater habitat requirements of steelhead and fall, late-fall, and spring-run Chinook salmon?

S-03a-05

- Are the existing temperature requirements defined under the State Water Projects Feather River Flow Constraints adequate for the operation of the Feather River Hatchery?

S-03a-06

- Is the availability of a cold-water pool in Lake Oroville adequate under present and future operational demands to meet the cold-water requirements defined under the State Water Projects Feather River Flow Constraints for the Feather River Hatchery?

S-03a-07

- Does the existing Temperature Control Device (TCD) in Lake Oroville provide adequate access to the cold-water pool during below normal water or drier years?

S-03a-08

- Will the existing TCD in Lake Oroville provide adequate access to the cold- water pool under future operational demands particularly during a series of dry and critically dry years?

S-03a-09

- Does the present temperature model have the ability to forecast average daily water temperatures, under present and future operational demands, in the low flow channel and in the river from the Thermalito Afterbay outlet down to Vernona?

S-03a-10

- How does the Feather River Hatchery requirement for warmer water in the summer impact river water temperatures required for holding or rearing of steelhead and spring-run Chinook salmon in the low-flow section? That is, should the hatchery water come directly from Lake Oroville rather than from the river at the Fish Barrier Dam in order that both hatchery and river temperature needs can be satisfied?

S-03a-11

- How does the pump-back operation during the summer months affect water temperatures required for holding and rearing of steelhead and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay?

S-03a-12

- Does the increase in river water temperature that results from warmer Thermalito Afterbay releases during the spring, summer, and fall months limit the amount of suitable steelhead and salmon habitat in the river downstream of Thermalito Afterbay?

S-03a-13

- Does the increase in river water temperature that results from warmer Thermalito Afterbay releases during the spring and early summer months affect survival of Salmonid species outmigrating from the Yuba River?

S-03a-14

Water Quality

- Are Dissolved Oxygen levels in the Feather River from Thermalito Afterbay to Live Oak a problem during the spring, summer and fall months?

S-03a-15

Fisheries Habitat Stream flow

- | | | |
|--|---|----------|
| <ul style="list-style-type: none">● Are the present stream flows defined under the State Water Projects Feather River Flow Constraints being met and are they adequately protecting steelhead and fall, late-fall, and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay for migrating, holding, spawning, and rearing of steelhead and fall, late-fall, and spring-run Chinook salmon? | } | S-03a-16 |
| <ul style="list-style-type: none">● Is additional Physical Habitat Simulations modeling (PHABSIM) necessary to determine what stream flows are necessary for spawning and rearing steelhead and fall, late-fall, and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-17 |
| <ul style="list-style-type: none">● Is riparian vegetative cover in the low-flow section and in the river downstream of Thermalito Afterbay adequate under present flow conditions for rearing steelhead and fall, late-fall, and spring-run Chinook salmon? | } | S-03a-18 |

Fluvial Geomorphology

- | | | |
|---|---|----------|
| <ul style="list-style-type: none">● Are the present flow requirements defined under the State Water Projects Feather River Flow Constraints adequate for maintaining natural fluvial river functions in the low-flow section and in the river downstream of Thermalito Afterbay (i.e., diversity of habitats: pool to riffle ratios, pool depth, stream bank angle, stream bank stability, stream bank vegetative cover, bedload deposition pattern, and stream bank vegetation root depth verses stream bank height above bankful height). | } | S-03a-19 |
| <ul style="list-style-type: none">● Under existing conditions, does the diversity and abundance of benthic macroinvertebrates in the low-flow section and in the river downstream of Thermalito Afterbay suggest a healthy stream channel? | } | S-03a-20 |
| <ul style="list-style-type: none">● Under existing conditions, are there adequate amounts of suitable gravel for Salmonid spawning in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-21 |
| <ul style="list-style-type: none">● Under existing conditions, are bankful flows frequent enough to maintain channel morphology, sediment transport, habitat diversity and adequate gravels for Salmonid spawning and rearing in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-22 |
| <ul style="list-style-type: none">● Under existing conditions, are the moderate winter floods and bankful flows adequately recruiting the amount of Large Woody Debris needed to maintain adequate Salmonid rearing habitat in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-23 |
| <ul style="list-style-type: none">● How will the future demand for project water change the timing and duration of moderate winter floods and bankful flows in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-24 |

Ramping and Fluctuation in River Flow

- Are the present project related flow ramping/fluctuation restraints adequately protecting rearing Salmonid species from being stranded in the low-flow section and in the river downstream of Thermalito Afterbay?

S-03a-25

- Are the present project related flow ramping/fluctuation restraints adequately protecting Salmonid redds and spawning gravel from being scoured out from the low-flow section and from the river downstream of Thermalito Afterbay?

S-03a-26

Introgression of Fall and Spring-run Chinook Salmon

- What engineering or other reasonable and prudent solutions are available that would prevent the interbreeding of fall and spring-run Chinook salmon in the low flow section of the Feather River (migration barrier and/or flow and temperature changes in low flow section)?

S-03a-27

Fish Diseases

- Would a fish screen(s) on the pump-back operation prevent Infectious Hemopoatic Necrosis (IHN) and other diseases specific to Salmonid species from spreading and becoming permanently established in Lake Oroville? IHN, if permanently established in Lake Oroville, would affect survival of hatchery and river spawned Salmonid species.

S-03a-28

Oroville Wildlife Area

- Are additional funds are needed to augment the existing budget of the Oroville Wildlife Area? Presently available Fish and Game funds are being dedicated to managing people and not wildlife habitat.
- Are additional funds are needed for law enforcement? Presently 2/3's of all the local game warden activities are spent on the Oroville wildlife Area. An augmentation of funding for more wardens would free up time for other law enforcement activities outside of the wildlife area.

S-03a-29

S-03a-30

Endangered Species

- Have adequate surveys been completed to determine what state or federally listed species (plant and animal) are potentially being impacted by project operations?

S-03a-31

Fish and Wildlife related Recreation

- Has DWR completed or met all its obligations for recreation mitigation (wildlife habitat and fishing) under the existing FERC license?

S-03a-32

STATE OF CALIFORNIA - THE RESOURCES AGENCY

DEPARTMENT OF FISH AND GAME

Gray Davis, Governor



OROVILLE/SPENCEVILLE WILDLIFE AREAS

945 ORO DAM BLVD. WEST
 OROVILLE, CA 95965-4419
 (530) 538-2236
 FAX: 538-2202

Henry M. Ramirez
 Chief Project Power Planning Branch
 FERC. 2100 Re-licensing
 P.O. Box 942836
 Sacramento, CA. 94236-0001

July 2, 2001

RE: FERC 2100 Re-licensing

Mr. Ramirez,

This letter addresses the Recreation and Socioeconomic Work Group's selection of interim projects and the Alternative Licensing Process (ALP). At the February 28, 2001, Plenary Meeting, the Department of Fish and Game (DFG) submitted copies of Oroville Wildlife Area's (OWA) short and long term budgetary needs. At that time we verbally requested that our submittal be considered by the Recreation and Socioeconomic Work Group's Task Force on Interim Projects. However, the DFG's request for budgetary support somehow never showed up for consideration by Task Force on Interim Projects. The operations and maintenance of the OWA has been a concern at all the work groups, especially the Environmental and Recreational groups. The biggest concerns in these groups are public safety, wildlife habitat, cleanliness, and is Fish & Game fulfilling the mitigation and/or mandates of the original license?

Under a 1968 agreement between the Department of Water Resources and DFG, the OWA was established for the purpose of creating and maintaining a public fish and wildlife management area. In a sense, the OWA was established to mitigate for wildlife habitat lost as a result of the construction of the Oroville Project. To date, funding for the operation and maintenance of the OWA has come entirely from the Fish and Wildlife Preservation Fund (Hunting Licence Fees) and from various state and Federal allocations. However, annual funding now received is only sufficient to cover O&M costs associated with the heavy recreational use. Under existing funding, DFG is unable to manage, create or enhance the wildlife habitat as expected when the OWA was established. Therefore, the DFG respectfully resubmits our request for additional funding or consideration by the Recreation and Socioeconomic Work Group's Task Force on Interim Projects. The request for additional funding (attached) addresses both the short and long term financial needs which we believe are necessary to achieve the wildlife mitigation goals of the OWA.

If you have any questions about the above numbers or the operational mandated and/or goals of the Oroville Wildlife Area, Please contact Mr. Mike Meinz ES III at (916) 358-2853 or Andrew Atkinson area manager OWA at (530) 538-2236.

Banky, Curtis
 Regional Manager
 SVCSR.

CC: Dale Hoffman- Florke
 Steve Nachtman (consultant)
 FERC Washington DC

S-03b-01

S-03b-02

S-03b-03

Short Term Needs:**Personnel:**

Two Py's Habitat Technician	@ 44,996.89 =	\$ 89,993.78
One PY Office Technician	@ 41,172.15 =	\$ 41,172.15
One PY Tractor operator laborer	@ 47,171.74=	\$ 47,171.74
Two Py's Wildlife Protection Officer ***	@ 59,905.86=	\$119,811.72
Three PY's Temporary time	@ 21,262.53=	\$ 63,787.59
	Sub Total	\$361,936.98
Administrative Overhead (15.3%)of Direct costs		\$ 55,376.36

Total Annual cost for personnel Services **\$417,313.34**

One time & Equipment costs Associated With Above Positions

Four Pickups ***	@25,000=	\$100,000
One One ton Service Pickup for TOL	@35,000=	\$ 35,000
One Wheel Tractor	@100,000=	\$100,000
One Sixteen foot Fold up disc	@24,000 =	\$ 24,000
Transport Truck & Trailer	@145,000=	\$145,000
Forklift	@25,000 =	\$ 25,000
	Sub Total	\$429,000

Administrative Overhead (15.3%)of Direct costs **\$ 65,637**

Total One time costs for Equipment **\$494,637**

Operation, Maintenance, & minor Equipment:

Total Approximate cost for O,M,&E needed *** \$180,000

	Sub Total	\$180,000
Administrative Overhead (15.3%)of Direct costs		\$ 27,540

Total Annual cost for OM&E **\$207,540**

Long term Needs**Personnel:**

One PY Habitat Supervisor II	@ 67,255.35=	\$ 67,255.35
One PY Habitat Supervisor I	@ 55,946.13=	\$ 55,946.13
Three Py's Habitat Technician	@ 44,996.89 =	\$134,990.67
One PY Office Technician	@ 41,172.15 =	\$ 41,172.15
TWO PY's Tractor operator laborer	@ 47,171.74=	\$ 94,343.48
Three Py's Wildlife Protection Officer	@ 59,905.86=	\$179,717.58
Four PY's Temporary time	@ 21,262.53=	\$ 85,050.12
One Range A/B Biologist	@ 53,681.29=	\$ 53,681.29
	Sub Total	\$712,156.77

Administrative Overhead (15.3%)of Direct costs **\$108,959.99**

Total Annual cost for personnel Services **\$821,116.76**

One time & Equipment costs Associated With Above Positions

Three Pickups	@25,000=	\$ 75,000
One Road grader	@180,000=	\$180,000
One Excavator	@180,000=	\$180,000
One Backhoe four wheel drive	@60,000 =	\$ 60,000
One front end loader	@125,000=	\$125,000
One dozer (cat D5C)	@240,000 =	\$240,000
Sub Total		\$860,000

Administrative Overhead (15.3%)of Direct costs **\$131,580**

Total One time costs for Equipment **\$991,580**

Operation, Maintenance, & minor Equipment:

Total Approximate cost for O,M,&E needed	***	\$378,000
Sub Total		\$378,000

Administrative Overhead (15.3%)of Direct costs **\$ 57,834**

Total Annual cost for OM&E **\$435,834**

Additional needs

ADA Compliant office area & Restrooms
Security System for Office & Shops
Seed & Chemical Building
Ten Wheel Dump Truck and trailer
Air Boat & Spray Equipment for Spraying ponds & Waterways

*** This number is different from original request due to public's overwhelming concerns for safety and area clean up.

**NEPA PUBLIC SCOPING PROCESS
OROVILLE FACILITIES RELICENSING
FERC PROJECT No. 2100**

COMMENTS OF THE STATE WATER CONTRACTORS (SWC)

John Coburn, General Manager

October 30, 2001

Retaining or enhancing the current water supply and power generation from the Oroville Facility is essential for maintaining a reliable and affordable water supply for the 23 million Californians and 750,000 acres of farmland served by the State Water Project (SWP).

W-01-01

Background The SWC represents 27 public agencies¹ throughout California that have long-term contracts for a supplemental water supply from the State Water Project (SWP). Planned, constructed and operated by the California Department of Water Resources (DWR), the SWP is the largest State-built, user-financed multipurpose water project in the U.S. Its main purpose is water supply. The Project diverts and stores surplus water during wet periods and distributes it to service areas in Northern California, the San Francisco Bay area, the San Joaquin Valley, the Central Coast and Southern California. Other project purposes include flood control, power generation, recreation, fish and wildlife protection, and water quality improvement in the Sacramento-San Joaquin Delta.

The Oroville Facility The SWP contractors are responsible for all costs related to water supply development and power generation at the Oroville Facility. The SWC is concerned that operational changes that may be proposed during relicensing could negatively impact future water costs. Operational changes that result in reducing the power generation capability and flexibility will result in increased water costs to the SWP contractors and, ultimately, much of the state's population. The SWP is the largest single consumer of electric power in the state. Any loss of generation at Oroville requires the SWP to purchase replacement energy. This not only increases the cost of water, it imposes additional demand on already scarce electric energy supply.

W-01-02

W-01-03

¹ Alameda County Flood Control & Water Conservation District, Zone 7; Alameda County Water District; Antelope Valley-East Kern Water Agency; Casitas Municipal Water District on behalf of the Ventura County Flood Control District; Castaic Lake Water Agency; Central Coast Water Authority on behalf of the Santa Barbara County FC&WCD; City of Yuba City; Coachella Valley Water District; County of Kings; Crestline-Lake Arrowhead Water Agency; Desert Water Agency; Dudley Ridge Water District; Empire-West Side Irrigation District; Kern County Water Agency; Littlerock Creek Irrigation District; The Metropolitan Water District of Southern California ("Metropolitan"); Mojave Water Agency; Napa County FC&WCD; Oak Flat Water District; Palmdale Water District; San Bernardino Valley Municipal Water District; San Gabriel Valley MWD; San Geronimo Pass Water Agency; San Luis Obispo Co. FC&WCD; Santa Clara Valley Water District; Solano County Water Agency; and Tulare Lake Basin Water Storage District.

However, the SWC's greatest concern is the possibility that operational changes will erode the water supply available to the SWP. California is on the verge of a water supply crisis that may well dwarf California's current energy crisis. The Oroville relicensing process must move forward without duplicating ongoing efforts on environmental and flood management issues if we are to ensure sound managements of the state's limited water resources.

W-01-04

The SWC appreciates the need to protect California's environment. The SWC is deeply involved in the ongoing CalFed process. CalFed is a consortium of state and federal resource agencies that is addressing the water quality, water supply and ecosystem needs of the Sacramento – San Joaquin River Delta and the San Francisco Bay (Bay-Delta). The CalFed process is striking a delicate balance between water supply and the environment. The impacts of CalFed programs will stretch well beyond the Bay-Delta, and encompass the Feather River in that program's "solutions" area. This relicensing process must proceed in full recognition of the overall CalFed program, the Central Valley Project Improvement Act and other ecosystem restoration initiatives. State Water Project water supplies are already contributing to CalFed's success.

W-01-05

Similarly, a joint state and federal effort is underway to identify and address flood management, public safety and ecosystem restoration issues in the 43,000 square-mile Sacramento and San Joaquin River watersheds. Congress and the California legislature authorized this multi-agency effort in response to massive Central Valley flooding in 1997. The goal of the Sacramento and San Joaquin River Basins Comprehensive Study is a master plan for the Sacramento and San Joaquin River basins that addresses flood damage reduction and ecosystem restoration in the Central Valley.

The environmental and flood management studies undertaken in the relicensing process need to be tightly focused within the project boundaries. Any options considered must be complementary to ongoing efforts, such as, the CalFed program and the Sacramento and San Joaquin Basins Comprehensive Study, and not result in additional losses of State Water Project water supplies.

W-01-06

W-01-07

W-01-08

Restructuring of the California power market has highlighted the importance of hydroelectric projects beyond their traditional capacity and energy production values. Maintaining or increasing the flexibility in releases is required to continue the beneficial use of the Oroville Facility for providing regulation, spinning reserves, non-spinning reserves, replacement reserves and voltage control required for reliable operation of the SWP and the California power grid.

W-01-09

The SWC recognize that the relicensing process involves the balancing of water and power supply benefits with environmental, recreational and flood management needs. The SWC urges DWR and the other relicensing participants to seek innovative and creative solutions to meet these needs – solutions that do not needlessly sacrifice precious power and water resources.

We will be submitting more detailed written comments on the Scoping Document by the November 26 deadline.

**NEPA PUBLIC SCOPING PROCESS
OROVILLE FACILITIES RELICENSING
FERC PROJECT No. 2100**

**COMMENTS OF THE KERN COUNTY WATER AGENCY
Thomas N. Clark, General Manager
October 30, 2001**

Retaining or enhancing the current water supply and power generation from the Oroville Facilities is essential for maintaining a reliable and affordable water supply for the 23 million Californians and 750,000 acres of farmland served by the State Water Project (SWP).

W-02-01

Background The Kern County Water Agency (Agency) is the largest Agricultural SWP Contractor and the third largest Municipal and Industrial (M&I) SWP Contractor having a total contract annual entitlement from the State of California of 1,046,730 acre-feet. Under the terms of the Agency's water supply contract with the State Of California, the Agency is responsible for repaying, with interest, its allocated share of the costs for developing and delivering SWP water supplies. The Agency's initial bill for 2002 SWP water deliveries totals approximately \$73 million. Through the end of 2000, the Agency has repaid more than \$1 billion in SWP costs, since 1966. The Agency provides water service to over 600,000 acres of farmland and about one-third of the homes and businesses in the metropolitan Bakersfield area.

The Oroville Facilities The Agency, as one of 27 SWP Contractors, is responsible for its allocated share of all costs related to water supply and power generation from the Oroville facilities. Operational changes that result in reducing the power generation capability and flexibility result in increased water costs to the Agency and ultimately landowners and other rate payers. Of equal or greater concern to the Agency and the other Contractors is the possibility that operational changes will erode the water supply available to the SWP. California is on the verge of a water supply crisis that may well dwarf California's current energy crisis. During the last two years under current regulatory conditions, the Agency's annual water allocation was reduced by 10 and 61 percent respectively. It is inconceivable that any potential operational change would justify further reducing the water supply yield from the Oroville facilities.

W-02-02

W-02-03

While the Agency appreciates the need to protect to protect California's environment, we are very concerned about the potential for duplication of efforts between the Oroville relicensing process, the CALFED Bay-Delta Program, and the Central Valley Project Improvement Act (CVPIA). In particular, the CALFED program is attempting to strike a delicate balance between water supply improvements and the environment. The impacts of CALFED programs will stretch well beyond the Bay-Delta, and encompass the Feather River in that program's "solution" area. The Oroville Facilities relicensing process must proceed in full recognition of the overall CALFED program, CVPIA and other ecosystem restoration initiatives. SWP water supplies are already contributing to CALFED's success. The environmental studies undertaken in the relicensing process need to

W-02-04

W-02-05

be tightly focused within the project boundary, and any options considered must be complementary to the CALFED program and not result in losses to SWP water supplies.

W-02-05
W-02-06

The chaotic power market conditions that California has experienced during the last two years demonstrates how existing hydroelectric projects are absolutely essential to California's and the nation's economy. Maintaining or increasing the flexibility in releases is required to continue the beneficial use of the Oroville facilities for providing regulation, spinning reserves, non-spinning reserves, replacement reserves and voltage control needed for reliable operation of the SWP and the California energy grid.

W-02-07

The Agency recognizes that the FERC relicensing process involves the balancing of power and water supply benefits with environmental, recreational, and flood management needs. The Agency urges that this process seek innovative and creative solutions to meet these needs - solutions that do not sacrifice precious water and power resources.



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588-5127

PHONE (925) 484-2600 FAX (925) 462-3914

**NEPA PUBLIC SCOPING PROCESS
OROVILLE FACILITIES RELICENSING
FERC PROJECT No. 2100**

**COMMENTS OF THE ZONE 7 OF
ALAMEDA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
Vincent D. Wong, Assistant General Manager
October 30, 2001**

Thank you for hearing my comments on the Oroville Facilities Relicensing. I'm here to express the importance of retaining or enhancing the current water supply and power generation from the Oroville Facilities because it is essential for maintaining a reliable and affordable water supply for the 23 million Californians and 750,000 acres of farmland served by the State Water Project (SWP).

W-03-01

Background Zone 7 of Alameda County Flood Control and Water Conservation District (also known as the Zone 7 Water Agency, or Zone 7) is a contractor with the California Department of Water Resources (DWR), for a water supply from the State Water Project. Zone 7 serves 180,000 people in eastern Alameda County, including the Cities of Livermore, Pleasanton, and Dublin. Zone 7 provides water to four major Municipal & Industrial retailers and to agricultural users, primarily for viticulture. The SWP supply meets approximately 70 percent of our local water demand, and is vital to the economic well being of our community. Zone 7 is one of three major water suppliers to eastern and southern portions of the Bay Area which depend of the SWP.

The Oroville Facilities As a SWP contractor, Zone 7 is responsible for its portion of costs related to water supply development and power generation at the Oroville Facilities. Operational changes that might result in reducing the power generation capability and flexibility of the facilities will result in increased costs to Zone 7 and other SWP contractors. These increased costs will be passed on to much of the state's population depending on the SWP. Of greater concern to Zone 7 and the other contractors is the possibility that operational changes will erode the water supply available to the SWP.

W-03-02

W-03-03

Zone 7 appreciates the need to protect California's environment, however we are very concerned about the potential for duplication of efforts between the Oroville relicensing process, the CALFED Bay-Delta Program, and the Central Valley Project Improvement Act. In particular, the CALFED program is attempting to strike a delicate balance between water supply improvements and the environment. The

W-03-04

impacts of CALFED programs will stretch well beyond the Bay-Delta, and include the Feather River in the CALFED "solution" area. The Oroville Facilities relicensing process must recognize the overall CALFED program, the Central Valley Project Improvement Act and other ecosystem restoration initiatives. State Water Project water supplies are already contributing to CALFED's success. The environmental studies undertaken in the relicensing process need to be tightly and strictly focused within the project boundary. Any options considered in the relicensing process must be complementary to the CALFED program and not result in losses to State Water Project water supplies.

W-03-04

W-03-05

W-03-06

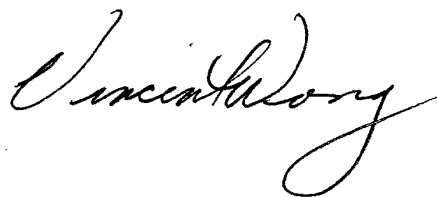
The restructuring of the California power market has highlighted the importance of hydroelectric projects beyond their traditional capacity and energy production values. Maintaining or increasing the flexibility in releases is required to continue the beneficial use of the Oroville Facility for providing regulation, spinning reserves, non-spinning reserves, replacement reserves and voltage control needed for reliable operation of the SWP and the California power grid.

W-03-07

Zone 7 recognizes that the FERC relicensing process involves the balancing of power and water supply benefits with environmental, recreational and flood management needs. We urge that this process seek innovative and creative solutions to meet these needs – solutions that do not sacrifice precious water and power resources.

W-03-08

We ask and thank you for your consideration of our comments not only on behalf of Zone 7, but also on behalf of all the people in the State of California.

A handwritten signature in black ink, appearing to read "Vincent Wong". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

NEPA PUBLIC SCOPING PROCESS
OROVILLE FACILITIES RELICENSING
FERC PROJECT No. 2100

COMMENTS OF THE CASTAIC LAKE WATER AGENCY
Robert C. Sagehorn, General Manager
October 30, 2001



Retaining or enhancing the current water supply and power generation from the Oroville Facilities is essential for maintaining a reliable and affordable water supply for the 23 million Californians and 750,000 acres of farmland served by the State Water Project (SWP).

W-04-01

Background The Castaic Lake Water Agency is a contractor with the California Department of Water Resources (DWR), for a water supply from the State Water Project. The Agency's service area is comprised of the Santa Clarita Valley, located in northern Los Angeles and eastern Ventura Counties. Our SWP supply meets approximately 50 percent of our local water demand, and is vital to the economic well being of our community.

DIRECTORS
E.G. "JERRY" GLADBACH
DONALD R. FROELICH
DEAN D. EFSTATHIOU
WILLIAM C. COOPER
ROBERT J. DIPRIMIO
WILLIAM PECSI
PETER KAVOUNAS
ED DUNN

The Oroville Facilities As a SWP contractor, CLWA is responsible for its portion of costs related to water supply development and power generation at the Oroville Facilities. Operational changes that result in reducing the power generation capability and flexibility will result in increased costs to CLWA and all the SWP contractors and, ultimately, much of the state's population. Of greater concern to our Agency and the contractors is the possibility that operational changes will erode the water supply available to the SWP. California is on the verge of a water supply crisis that may well dwarf California's current energy crisis. It is hard to imagine any credible operational changes that would justify reducing the water supply yield from the Oroville Facilities.

W-04-02

THOMAS P. CAMPBELL

GENERAL MANAGER

W-04-03

ROBERT H. CLARK

While the Agency appreciates the need to protect California's environment, we are very concerned about the potential for duplication of efforts between the Oroville relicensing process, the CALFED Bay-Delta Program, and the Central Valley Project Improvement Act. In particular, the CALFED program is attempting to strike a delicate balance between water supply improvements and the environment. The impacts of CALFED programs will stretch well beyond the Bay-Delta, and encompass the Feather River in that program's "solution" area. The Oroville Facilities relicensing process must proceed in full recognition of the overall CALFED program, the Central Valley Project Improvement Act and other ecosystem restoration initiatives. State Water Project water supplies are already contributing to CALFED's success. The environmental studies undertaken in the relicensing process need to be tightly focused within the project boundary, and any options considered must be complementary to the CALFED program and not result in losses to State Water Project water supplies.

SECRETARY
LINDA J. FLEMING

W-04-04

W-04-05

W-04-06

"A PUBLIC AGENCY PROVIDING RELIABLE, QUALITY WATER AT A REASONABLE COST TO THE SANTA CLARITA VALLEY"

Restructuring of the California power market has highlighted the importance of hydroelectric projects beyond their traditional capacity and energy production values. Maintaining or increasing the flexibility in releases is required to continue the beneficial use of the Oroville Facility for providing regulation, spinning reserves, non-spinning reserves, replacement reserves and voltage control needed for reliable operation of the SWP and the California power grid.

W-04-07

The Agency recognizes that the FERC relicensing process involves the balancing of power and water supply benefits with environmental, recreational and flood management needs. We urge that this process seek innovative and creative solutions to meet these needs – solutions that do not sacrifice precious water and power resources.

W-04-08



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Executive Office

November 26, 2001

Mr. Len Marino
Department of Water Resources
State Water Project Analysis Office
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001

Dear Mr. Marino:

Comments on September 27, 2001 Draft NEPA Scoping Document 1 and CEQA Notice of Preparation for Oroville Facilities Relicensing (FERC Project No. 2100)

The Metropolitan Water District of Southern California ("Metropolitan") is pleased to submit the following comments on the September 27, 2001 Draft National Environmental Policy Act ("NEPA") Scoping Document 1 and California Environmental Quality Act ("CEQA") Notice of Preparation for the Federal Energy Regulatory Commission's ("FERC") Relicensing of the Oroville Facilities, FERC Project No. 2100 (hereinafter referred to as "Scoping Document").

Metropolitan is a member agency of the State Water Contractors (SWC), and we support the comments submitted by the SWC. A copy of written comments submitted by Metropolitan at the public hearing on October 30, 2001 is also attached for inclusion in the administrative record.

The Oroville Facilities' importance to the State of California's water supply and power generation cannot be overstated. It is critical that the California Department of Water Resources act as a good steward and safeguard those benefits through the relicensing process. At the same time, preservation of the flood control, recreation and fish and wildlife objectives provided by the Oroville Facilities is also important. The relicensing process should balance decision-making regarding the above resources and objectives without compromising any of their associated existing benefits.

W-05-01

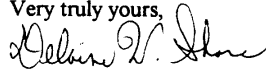
W-05-02

W-05-03

We thank you for this opportunity to comment on the Scoping Document, and we look forward to participating further in the Oroville relicensing proceedings.

Ms. Len Marino
Page 2
November 21, 2001

Very truly yours,



(for) Laura J. Simonek
Manager, Environmental Planning Unit

Enclosure

cc: Mr. James Fargo
Federal Energy Regulatory Commission
Office of Hydropower Licensing
888 First Street, N.E.
Washington, DC 20426

**STATEMENT OF TIMOTHY QUINN
VICE PRESIDENT, STATE WATER PROJECT RESOURCES
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**

October 30, 2001

Good afternoon, I am Timothy Quinn. I serve as the Vice President for State Water Project Resources of the Metropolitan Water District of Southern California (Metropolitan). Today, I would like to offer comments on two aspects of this proceeding: first, regarding Oroville Reservoir as a power generation facility; second, and more importantly, regarding the relationship between this proceeding and the CALFED process, a statewide planning effort regarding the entire Bay-Delta watershed, of which Oroville Reservoir is only a small part.

POWER GENERATION

With regard to Oroville as a power generation facility, it is important to note that Oroville Reservoir provides clean, renewable hydroelectric power, which is furnished to the statewide power grid. While the total power demands of the State Water Project (SWP) are tremendous and exceed the power generation capabilities of Oroville, the SWP is primarily operated to produce energy for the grid during on-peak hours and to consume energy during off-peak hours. This method of operation has provided enormous benefits to California energy consumers during the recent energy crisis by keeping peak energy consumption down and the lights in homes, factories, and businesses on.

W-05-04

THE CALFED PROCESS

More important, it is critical that FERC relicensing respect the CALFED Bay-Delta Program, which for nearly seven years has been developing a comprehensive program – now in implementation – for managing the entire Bay-Delta watershed for environmental and economic purposes.

W-05-05

CALFED has developed a far-reaching plan for environmental protection and restoration in the Bay-Delta watershed. This plan includes an Environmental Water Account and

W-05-06

other measures to provide water flows for fish populations based on sound science. The plan incorporates substantial operational restrictions on the SWP and federal Central Valley Project for the same purpose. In addition, the CALFED Program is now implementing a multi-billion dollar program to restore habitat throughout the watershed. We strongly believe that it would be highly inappropriate for this process to second-guess the measures and level of protection for the environment developed through this extensive public process.

W-05-06

With regard to water supply issues, the CALFED process has strongly emphasized development of local resources and other innovative management approaches to meet growing demands for water in California. Nowhere has this mandate been more fully implemented than in Southern California. The Southern California Regional Integrated Resources Plan provides for billions of dollars of investment in reclamation, conservation, water transfers, and other measures to reduce the demands for SWP water. We have also invested billions of dollars in south-of-Delta storage, including Diamond Valley Lake in Riverside County and major groundwater storage projects, to take advantage of high-flow periods and reduce demands on the SWP system when it is critically dry.

W-05-07

The plain fact is that in Southern California, we are not relying on supplies from Oroville Reservoir to meet growing demands for water. While the reliability of existing SWP supplies is critical for the regional economy, additional supplies from Oroville are not part of our plans to meet Southern California's future water supply needs. We respectfully request that this fundamental fact be recognized as this process moves forward. Thank you very much for this opportunity to express the views of Metropolitan regarding this important proceeding.

W-05-08

DUANE MORRIS
ATTORNEYS AT LAW

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November 26, 2001

VIA EXPRESS MAIL AND ELECTRONIC MAIL
(orovillep2100@water.ca.gov)

Mr. Len Marino
Department of Water Resources
State Water Project Analysis Office
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001

Re: Oroville Facilities Relicensing

Dear Mr. Marino:

On behalf of the Santa Clara Valley Water District (District), we are providing you with comments on the draft NEPA Scoping Document 1 and CEQA Notice of Preparation, Oroville Facilities Relicensing FERC Project No. 2100, which was published on or about September 27, 2001.

The District is the public agency responsible for comprehensive water resource management for Santa Clara County, including wholesale water supply, flood management, and stream stewardship. The District encompasses all of the County's 1,300 square miles and 15 cities, including the 1.7 million residents and 200,000 commuters. The District provides water for use by people in homes, and supports agricultural, business, and industrial communities throughout the County, including the vital high technology industry in the area known as "Silicon Valley." At this time, the County generates approximately \$100 billion per year in gross annual product. It is essential that the reliability of the District's water supply be maintained or enhanced to protect this thriving economy.

An important part of maintaining or enhancing the District's water supply is the water it receives from the State Water Project (SWP). Through a contract with the State of California, the District has a right to 100,000 acre-feet of SWP water per year, which is principally

W-06-01

Mr. Len Marino
Department of Water Resources
State Water Project Analysis Office
November 26 2001
Page 2

developed by the Oroville facilities. Under current regulatory restrictions, our understanding is that the District can expect to receive only 65 to 70 percent of this contract amount on a long-term average basis. In critical dry periods, this annual average may be as little as 35 percent. The District supplements SWP supplies with other local and imported water sources, but those also are subject to shortages. Furthermore, each source is different in its water quality, hydrologic availability and other characteristics. For this reason, the SWP water plays a unique and important role in meeting the overall operational objectives of the District, and thus, it is essential that the relicensing of the Oroville facilities results in no reduced water supply from those facilities.

W-06-01

The SWP water supply and the resulting benefits to California's economy are closely tied to the power generated by the Oroville hydroelectric facilities. Those facilities, which have a combined licensed capacity of approximately 762 megawatts, are used to generate a portion of the power the State of California needs to supply SWP water to its water supply contractors. Without a reliable supply of power from the Oroville hydroelectric facilities, the benefits to California's economy, including those from Santa Clara County, could be diminished.

W-06-02

The District has been participating in the relicensing process to protect its vital interest in the SWP and submits this comment letter for the same purpose. As part of its participation in the relicensing, on or about July 9, 2001, the District submitted comments on the June 11, 2001 Draft NEPA Scoping Document 1 and CEQA Notice of Preparation, Oroville Facilities Relicensing, FERC Project No. 2100. On that same date, the State Water Contractors (SWC) also submitted comments on that draft document. The District appreciates the effort of the Department of Water Resources (DWR) to address those comments. Unfortunately, not all of the comments were incorporated into the most recent draft of the Scoping Document 1 and Notice of Preparation. Accordingly, the District incorporates the July 9, 2001 comments of the District and SWC herein by reference and requests that DWR reconsider and address those earlier comments in the final Scoping Document 1 and Notice of Preparation.

W-06-03

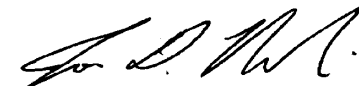
In addition, the District is aware and has reviewed the SWC comments on the September 27, 2001 draft NEPA Scoping Document 1 and CEQA Notice of Preparation. The District agrees with and incorporates those comments herein by reference.

W-06-04

Mr. Len Marino
Department of Water Resources
State Water Project Analysis Office
November 26 2001
Page 3

Thank you for your consideration of the District's concerns.

Sincerely,
Duane, Morris & Heckscher LLP



By: Jon D. Rubin

cc: Joan Maher (SCVWD)
Frank Cotton (SCWVD)
Craig T. Jones (SWC)

State Water Contractors

455 Capitol Mall, Suite 220 • Sacramento, CA 95814-4409
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Antelope Valley-East Kern Water Agency
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Santa Clara Valley Water District

November 26, 2001

Mr. Len Marino
Department of Water Resources
State Water Project Analysis Office
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001

Re: **NEPA Scoping Document 1 and CEQA Notice of Preparation for the Oroville Facilities Relicensing, Federal Energy Regulatory Commission, Project No. 2100 September 27, 2001**

Dear Mr. Marino:

The State Water Contractors, Inc. (SWC) is responding on behalf of its 27 member agencies¹ to the Department of Water Resources' (DWR's) request for comments on the September 27, 2001 Draft NEPA Scoping Document 1 and CEQA Notice of Preparation, Oroville Facilities Relicensing, FERC Project No. 2100 (Scoping Document or SD1). The SWC submitted comments on both the initial and second draft of SD1. The SWC and several of its member agencies also provided comment at the October 30 Public Scoping Meeting for the Oroville Facilities Relicensing.

The SWC appreciates DWR's efforts in addressing comments on the earlier drafts of SD1. However, not all of the SWC comments on the August 24, 2001 draft were incorporated into the September 27, 2001 revision of SD1. The SWC asks DWR to reconsider these earlier comments. Two of the comments that DWR did not fully address in the September 27, 2001 revision of SD1 are repeated here with

W-07-01

¹ Alameda County Flood Control & Water Conservation District, Zone 7; Alameda County Water District; Antelope Valley-East Kern Water Agency; Casitas Municipal Water District on behalf of the Ventura County Flood Control District; Castaic Lake Water Agency; Central Coast Water Authority on behalf of the Santa Barbara County FC&WCD; City of Yuba City; Coachella Valley Water District; County of Kings; Crestline-Lake Arrowhead Water Agency; Desert Water Agency; Dudley Ridge Water District; Empire-West Side Irrigation District; Kern County Water Agency; Littlerock Creek Irrigation District; The Metropolitan Water District of Southern California ("Metropolitan"); Mojave Water Agency; Napa County FC&WCD; Oak Flat Water District; Palmdale Water District; San Bernardino Valley Municipal Water District; San Gabriel Valley MWD; San Geronimo Pass Water Agency; San Luis Obispo Co. FC&WCD; Santa Clara Valley Water District; Solano County Water Agency; and Tulare Lake Basin Water Storage District.

additional justification on why DWR should adopt the suggested changes. The SWC is also providing comments in additional areas.

SWC ISSUES NOT FULLY ADDRESSED IN THE SEPTEMBER 27 SD1 DRAFT

1) DWR's Relicensing Goals and Objectives

DWR partially responded to the SWC suggestion to include DWR's relicensing goals and objectives in SD1. DWR included its relicensing goal on page 1 of the September 27 revision but did not include its relicensing objectives for each of the resource areas.

W-07-02

The California Environmental Quality Act (CEQA) requires that the project description for all Environmental Impact Reports (EIR) include a statement of the objectives sought by the proposed project. A clearly written statement of objectives will guide the lead agency in the development of a reasonable range of alternatives to evaluate in the EIR and will aid decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.² Likewise, the National Environmental Policy Act (NEPA) requires that all Environmental Impact Statements (EIS) briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.³ These regulations also clearly state that the alternatives, including the proposed action, are the heart of the environmental impact statement.⁴

According to the Initial Information Package (IIP) for Oroville Project relicensing, project purposes include water supply, power generation, flood control, fish and wildlife, and recreation. The SWC suggests that the Scoping Document should include clearly stated goals and objectives based on the underlying purposes stated in the IIP. As noted above, clearly articulated goals and objectives will guide the definition of the project alternatives selected for comparative analysis in the environmental impact assessment process. The SWC recommends that goals and objectives for Oroville Facilities relicensing by FERC include preservation of existing water supply, power generation and flood management benefits. DWR should adopt appropriate goals and objectives for each resource area.

2) Study Need Evaluation Criteria

The SWC also suggested that two documents that provide criteria for evaluating the need for proposed studies be included as an appendix in the next version of the Scoping Document. The reference documents were originally distributed at the

W-07-03

2 CEQA Guidelines Section 15124(b).
3 40 CFR 1502.13.
4 40 CFR 1502.14.

August 27 Land Use, Land Management and Aesthetics Study Plan Development Task Force meeting. Since that time, DWR has refined and distributed the evaluation criteria to other task forces and work groups. The SWC recommends that DWR review the evaluation criteria with the Plenary Group and include the criteria in the next version of the Scoping Document. Including these evaluation criteria in the Scoping Document will facilitate understanding the Study Plan Development process described in Figure 2.

W-07-03

ADDITIONAL ISSUES

1) Identification of Project Alternatives and the Environmental Baseline

The SWC concurs with the Scoping Document's statements in Section 3.1.3, p. 20 that the "No Action Alternative" is not pre-project conditions but continued operation of the Oroville facilities under the terms and conditions of the current FERC license. This accords with case law and FERC practice.⁵

W-07-04

The Scoping Document also correctly states that the No-Action Alternative "establishes the baseline environmental conditions against which all other 'action' alternatives will be compared." Section 3.1.3, p. 20. The SWC suggests amending this language to clarify what is implicit therein, namely, that the baseline is used to compare the environmental effects, including cumulative effects, of the proposed project and the alternatives. Thus, the last sentence in Section 3.1.3 would read: "Pursuant to NEPA, the 'no action' this alternative, i.e., continued operation of the Oroville facilities under the terms and conditions of the current license, establishes the baseline environmental conditions against which the environmental effects, including cumulative effects, of the proposed project and all other 'action' alternatives will be compared." This approach accords with NEPA practice.⁶

⁵ See *American Rivers v. FERC*, 201 F.3d 1186, 1195-1201 (9th Cir. 1999) wherein the Ninth Circuit held that, in hydropower relicensing, the environmental baseline consists of current existing environmental conditions with the existing hydroelectric power facilities, not a historical recreation of conditions that would exist without those facilities; the "no action" alternative is continued operation of the project under the current license.; See also *Conservation Law Foundation v. FERC*, 216 F.3d 41, 45-46 (D.C. Cir. 2000); *City of Tacoma*, 71 FERC ¶ 61,381, at 62,491-492 (1995); *Public Service Company of New Hampshire*, 68 FERC at 61,866-868 (1994).

⁶ *American Rivers v. FERC*, *supra*, 201 F.3d at 1195, n. 15 "A baseline is . . . employed to identify the environmental consequences of a proposed agency action."; CEQ, *Considering Cumulative Effects* at 1 "The range of alternatives considered must include the no-action alternative as a baseline against which to evaluate cumulative effects", and at 23 "These baseline conditions provide the context for evaluating environmental consequences."; *Public Service Co. of New Hampshire*, *supra*, 68 FERC at 61,867, "The staff's definition of the no action alternative as continued operation of the project under the same terms and conditions as the existing license simply reflects this statutory reality. It also establishes an environmental benchmark or baseline for comparison of the environmental effects of the proposed action and alternatives." emphasis added. As FERC has noted, because this is the proper baseline in a relicensing proceeding, one must reject the notion that "all past damage caused to fish and wildlife caused by the project must be 'mitigated' in a relicensing proceeding." *City of Tacoma*, *supra*, 71 FERC at 62,492.

The SWC also agrees with the discussion in Section 3.2 that, at this stage of the NEPA process, the alternatives of project retirement or issuance of a non-power license can be eliminated from further consideration. FERC has recognized in other proceedings that it is appropriate to eliminate decommissioning and non-power license alternatives at the scoping stages when, as here, those alternatives are not reasonable.⁷ Eliminating these alternatives now will conserve resources for the analysis of realistic and feasible alternatives.

W-07-04

2) Cumulative Effects

Section 5.1 of the Scoping Document states that the geographic scope of the cumulative effects analysis "may vary from resource to resource" and that the analysis for each resource "will be defined during development of the PDEA." The Scoping Document also invites comments on the "scope and approach for completing the cumulative impact analysis."

W-07-05

The SWC agrees that the geographic scope of the cumulative effects analysis will vary from resource to resource.⁸ However, the SWC believes that the Scoping Document should provide more guidance on the proper scope of the cumulative effects analysis, and offers the following comments on this issue.

First, according to the Council on Environmental Quality's ("CEQ") guidance document, *Considering Cumulative Effects under the National Environmental Policy Act* ("Considering Cumulative Effects"), January 1997 at 11-16, the first step should be to identify, during scoping, the significant cumulative effects issues associated with relicensing. This identification turns on analysis of the cause-and-effect relationships between the project, other actions in the area, and particular, specified resources. Only after such analysis has been done should the appropriate geographic scope of the cumulative effects analysis be ascertained. Consequently, the current attempt by some resource agencies to define the geographic scope of the cumulative effects analysis as the "entire river basin," or the "downstream to the confluence with the ocean" inverts the proper sequence of the analysis. Geographic scope is properly determined only after cumulative effects pathways and cause-effect relationships have been analyzed, and after specific cumulative effects issues have been identified, not before.⁹

W-07-06

⁷ *Minnesota Power and Light Company*, 83 FERC ¶ 62,073 at 64,112-64,113 (1998); *Consolidated Hydro Maine, Inc.*, 81 FERC ¶ 62,172 at 64,388 (1997); *N.E.W. Hydro, Inc.*, 81 FERC ¶ 61,238 at 62,005-62,006 (1997).

⁸ FERC's past practice has been to use different geographic areas for its cumulative effects analyses depending upon the particular resource being analyzed. See *Georgia Power Company*, 88 FERC ¶ 62,314 at 64,677 (1999).

⁹ Various parties and agencies have urged FERC in the past to adopt a blanket rule that the proper geographic scope for cumulative effects analysis should always be the entire river basin or the entire watershed where the particular project at issue is located. See *Use of Reserved Authority in Hydropower Licenses to Ameliorate Cumulative Impacts: Policy Statement*, *FERC Statutes and Regulations, Regulations Preambles, 1991-1996*, ¶ 31,010 at 31,214 (1994), noting that commenters had urged FERC to require a "systematic cumulative analysis of all rivers and projects in the same watershed basin", and to

Second, there are important practical limitations on the scope of a cumulative effects analysis. The CEQ has cautioned that "[n]ot all potential cumulative effects issues identified during scoping need to be included in an EA or an EIS", and that "[c]umulative effects analysis should 'count what counts', not produce superficial analyses of a long laundry list of issues that have little relevance to the effects of the proposed action or the eventual decision."¹⁰ FERC also has recognized the "problem of extending the geographical area of an environmental analysis so significantly that analytical methods might not be able to develop reliable estimates of impacts and needed mitigation measures." As FERC has explained: "In the environmental review process, practical limits must necessarily be established regarding the geographic area in which impacts of the proposed action are likely to occur; the scope of analysis could otherwise be virtually unlimited."¹¹

W-07-07

Third, if other studies and reports have been prepared in other proceedings that analyze cumulative effects on the resources affected by relicensing, then those studies and reports should be used for the analysis of cumulative effects in this proceeding. It makes no sense to conduct new environmental studies here if those same studies already have been done or are planned in other proceedings. Foremost among these proceedings is the CALFED Program, discussed below.

W-07-08

The CEQ also has noted that studies by other agencies should be utilized in analyzing cumulative effects, and that an agency need not "reinvent the wheel" if some other agency has already analyzed the issue.¹² In *California Trout v. Schaefer*, 58 F.3d 469, 474 (9th Cir. 1995), the court rejected the argument that the Environmental Assessment for the Stockton East Water District's Stanislaus River diversion canal should have analyzed impacts to fisheries downstream in the Stanislaus River. The court noted that other environmental analyses of these impacts had already been done by other agencies, and the duplicating such analyses was unnecessary:

find that a case-by-case analysis of the proper scope of a cumulative effects analysis was erroneous. FERC however, has been unreceptive to this argument. See *Public Service Co. of New Hampshire*, *supra*, 68 FERC at 61,862-61,863 "neither the CEQ regulations nor the [Federal Power Act] requires that, for an environmental impact statement prepared to consider the licensing of any particular hydropower projects on a river, the geographic scope of a cumulative impact analysis must constitute the entire river basin. . . . Rather, a determination must be made in each instance of the geographic area in which such other actions might occur that, in combination with the proposed action, could create cumulative effects." Emphasis added.

¹⁰ See *Considering Cumulative Effects* at 12.

¹¹ *Public Service Co. of New Hampshire*, *supra*, 68 FERC at 61,863-864, emphasis added. See also *Fraser Papers, Inc.*, 83 FERC ¶ 61,129 at 61,575 (1998), rejecting the argument that the EIS must study a variety of "basinwide" impacts because "while such a massive undertaking might produce interesting data, it would not add any reasonable alternatives to the proceeding."

¹² See *Considering Cumulative Effects*, *supra*, at 12 "Because cumulative effects can result from the activities of other agencies or persons, they may have already been analyzed by others", and at 20 "Because the actions of other agencies are part of cumulative effects analysis, greater emphasis should be placed on consulting with other agencies than is commonly practiced." emphasis added.

"The SEWD project and its effects on the downstream fisheries, have been the subject of at least four in-depth governmental studies, all of which were followed by extensive public review and comment. Moreover, those studies, at congressional behest, are currently being updated by the Bureau [of Reclamation under the Central Valley Project Improvement Act]. Requiring the Corps to duplicate these efforts would be nonsensical. [citation omitted].". Emphasis added.¹³

W-07-08

FERC's ability to reserve authority to revisit cumulative effects after a license has been issued provides a further mechanism for integrating the results of later cumulative effect studies into the project license.¹⁴ Thus, if a concern should arise that an important cumulative effect has been overlooked, appropriate studies can be conducted after the license has been issued to address any identified deficiency.

W-07-09

Finally, the Scoping Document says little about the scope of analysis of growth-inducing impacts.¹⁵ Some resource agencies have suggested that the EA address the role of Oroville relicensing in facilitating and inducing urban growth in Southern California, the Bay Area and agricultural development in the Central Valley, and elsewhere. The scope of analysis of growth-inducing impacts, however, should be more limited. The courts have distinguished between projects that satisfy an existing need or demand – which do not require analysis of growth-inducing potential – and projects that go way beyond an existing need, and thereby induce and facilitate further growth, that do require analysis of growth-inducing impacts.¹⁶ Here, the assumed baseline for the environmental analysis is continued operation of the project under the current license and the existing level of urban and agricultural

W-07-10

13 See also *State of North Carolina v. F.A.A.*, 957 F.2d 1125, 1130-1131 (4th Cir. 1992) F.A.A. need not conduct its own analysis of cumulative effects but could rely on the analysis of cumulative effects that would be made in the environmental documentation for additional air space restrictions that were being proposed.

14 While such reserved authority or reopener clauses in a license cannot be a substitute for conducting a thorough cumulative effects analysis, they do avoid the problem of delaying relicensing to await completion of other cumulative environmental effects studies, and thereby foregoing the environmental benefits of immediate relicensing. "There will be circumstances, however, in which comprehensive analysis of all potential cumulative impacts could entail unacceptably long delays in the relicensing process. Such delays could in themselves generate harm to the environment by delaying the implementation of necessary environmentally ameliorative construction or operation pursuant to a new license. Thus, if it is not possible to fully explore all of the cumulative impacts on a timely basis, the Commission will reserve the authority necessary to revisit those issues at a later date." Use of Reserved Authority in Hydropower Licenses to Ameliorate Cumulative Impacts: Policy Statement, *FERC Statutes and Regulations, Regulations Preambles, 1991-1996, supra*, at 31,218.

15 Growth-inducing impacts fall within the rubric of "indirect" rather than "cumulative" effects, but they are included in this cumulative effects discussion.

16 See *Morongo Band of Mission Indians v. F.A.A.*, 161 F.3d 569, 580 (9th Cir. 1998), holding that an Environmental Assessment for an airport expansion project at Los Angeles International Airport (LAX) need not analyze growth-inducing impacts because the project was addressing an existing problem at LAX, and the fact that "it might also facilitate further growth is insufficient to constitute a growth-inducing impact"; *City of Carmel-By-The-Sea v. U.S. Department of Transportation*, 123 F.3d 1142, 1162 (9th Cir. 1997), holding that no growth-inducing impacts analysis was required for a highway expansion project because the freeway was in an area already well-developed, and it is "the existing development that necessitates the freeway" rather than the other way around.

development. Relicensing is not providing an expanded water supply in excess of current demand which will induce further urban and agricultural development. Therefore, relicensing does not necessitate an extensive analysis of growth-inducing impacts on the urban and agricultural sectors.

W-07-10

3) Coordination with Comprehensive Proceedings

A. Coordination with the CALFED Program

The Scoping Document discusses the CALFED Program in section 2.4, p. 15 (Existing Environmental Protection Measures). That discussion states that the CALFED Program is developing a long-term comprehensive program for the Bay-Delta that will address issues identified in the Oroville relicensing, and that relicensing will be coordinated with CALFED to prevent duplication of effort and funding. The SWC agrees with this discussion but believes that it is too brief, and fails to identify the important reasons for coordinating Oroville relicensing with the CALFED Program. These include the following.

W-07-11

First, Section 10(a)(2) of the Federal Power Act (FPA), 16 U.S.C. section 803(a)(2) requires FERC to consider the extent to which the proposed project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. The CALFED Program is one of the largest estuary and ecosystem restoration and improvement programs in the United States, with billions of dollars to be spent on ecosystem, safety, and water supply projects. Its "solution area" covers the entire watershed and tributaries of the Sacramento River, including the Feather River and the Oroville Facilities area. Clearly, the CALFED Program constitutes a "comprehensive plan" with which Oroville relicensing must be closely coordinated

W-07-12

Second, apart from the FPA, an adequate analysis of cumulative effects of Oroville relicensing cannot be made unless it is closely coordinated with the CALFED Program. The CALFED Program intends to spend hundreds of millions of dollars on ecosystem restoration projects that will benefit resources potentially affected by Oroville relicensing. Cumulative effects that must be analyzed under NEPA include beneficial – as well as adverse – environmental impacts.¹⁷ Therefore, the analysis of cumulative effects in the Oroville PDEA must include the beneficial impacts of environmental restoration projects developed through the CALFED Program.

W-07-13

Coordination with CALFED is essential not only to take into account the cumulative beneficial effects of the CALFED Program but also to fully utilize the studies of cumulative effects that CALFED has, is or will be conducting. The CEQ's guidance document notes that studies of cumulative effects may already have been

W-07-14

¹⁷ See, for example, *Considering Cumulative Effects*, *supra*, at 27 "other activities that benefit the environment (e.g., restoration projects) should be included to determine the overall net (adverse or beneficial) effect on the environment."

completed by other agencies: "[b]ecause cumulative effects can result from the activities of other agencies or persons, they may already have been analyzed by others."¹⁸ As noted above, courts have rejected the notion that different agencies need to conduct duplicative studies of the cumulative effects on the same resources.¹⁹ Because the CALFED Program contemplates an extensive program of scientific and environmental studies that can be used to evaluate the cumulative effects of Oroville relicensing, it is essential to utilize those studies in any cumulative analysis undertaken here. One of the basic criteria for approval of any study program for Oroville relicensing should be a determination whether a comparable study has been or will be conducted in the CALFED Program. To facilitate the consideration of studies proposed and underway under the CALFED Program, they should be identified and listed in Appendix D to the Scoping Document.

W-07-14

Close coordination with the CALFED Program is also needed because some of the agencies or actors whose activities may be contributing to cumulative effects are present, and involved, in the CALFED Program but not in the Oroville relicensing. One example might be the U.S. Bureau of Reclamation, whose Central Valley Project operations are a source of concern to some participants in this relicensing. Rather than using a very broad geographic scope for the analysis of cumulative effects of relicensing, it makes more sense to coordinate with the CALFED Program which will include a broad analysis of cumulative effects, and where the various agencies and actors potentially responsible for those cumulative effects are present.

W-07-15

Finally, apart from the FPA and NEPA, close coordination with the CALFED Program should be pursued given the commitments of the CALFED participants to maintain the integrity and comprehensiveness of the CALFED process. For the CALFED Program to work, all participants therein need to pursue a comprehensive solution to the interrelated environmental, safety and water supply issues of the Bay-Delta in CALFED rather than pursue their particular objectives in collateral proceedings outside the CALFED process. This is essential to avoid fragmentation of the policy issues and disputes into a multiplicity of different uncoordinated regulatory proceedings, which result would fundamentally frustrate the global approach intrinsic to the CALFED Program.

W-07-16

Because coordination of NEPA scoping for Oroville relicensing with the CALFED Program is so important, the Scoping Document needs to explain how this will be achieved. The SWC proposes that a separate work group be established to institutionalize this coordination and liaison function with the CALFED Program.

W-07-17

W-07-18

¹⁸ *Id.*, at 12, *emphasis added*.

¹⁹ See *State of North Carolina v. F.A.A.*, *supra*, 957 F.2d at 1131 "the environmental impact statement as supplemented for the Cherry I and Core military operation areas will address the cumulative impact of the special use airspace at issue in this case. A cumulative impact analysis is therefore not necessary at this point, and it would be a waste of resources given the necessity for analysis of the cumulative impact of this and other proposals in connection with the Cherry I and Core military operation areas. Courts should not require wasteful duplication of effort." *emphasis added*.

B. Coordination with Other Comprehensive Proceedings

NEPA scoping must also be coordinated, for many of the same reasons outlined for the CALFED process, with other comprehensive proceedings that are closely related to the Oroville relicensing. These other proceedings include the Central Valley Project Improvement Act implementation, the Sacramento and San Joaquin River Basins Comprehensive Study and the Yuba County Water Agency's Yuba-Feather Flood Protection Program. The Sacramento and San Joaquin River Basins Comprehensive Study is a joint effort of the US Army Corps of Engineers and the Reclamation Board of the State of California to address flood damage reduction in the Central Valley. The Scoping Document should provide an expanded explanation of how coordination with other comprehensive proceedings will occur. As part of this explanation, DWR should include an extensive list of studies with direct ties to the Oroville project that are currently underway with other agencies.

W-07-19

4) Study Program Concerns

The SWC understands that DWR is facing a very tight timeframe to complete and implement a plan to commence the studies program as soon as practicable in 2002. The SWC acknowledges that a very broad collaborative team consisting of several Work Groups and a Plenary Group has been convened to work with DWR throughout the Alternative Licensing Process to ensure that resource concerns and needs are considered and appropriate studies are conducted. While the SWC is encouraged by the recent move to implement a disciplined approach to the studies program, the SWC encourages DWR and its consultants to focus on the importance of grouping studies by function and assigning critical path status to those studies that must move forward in order to timely collect vital field information in early 2002. The SWC will provide detailed comments to the collaborative team regarding a proposed functional structure for the studies program as the study plan review process proceeds to Plenary Group approval early in 2002.

W-07-20

5) Specific Edits

The statements in the Introduction to Appendix D do not clearly communicate that the appendix only contains studies that DWR is conducting. The title and introduction to Appendix D need to be changed to convey the same information contained in Section 3.2.2, p. 20, "The licensee is currently conducting studies that focus on water quality and aquatic resources ...These studies are summarized in Appendix D."

W-07-21

The SWC also recommends deleting the fourth bullet in Section 3.1.2 "Other Alternatives to be Formulated and Considered." This bullet addresses the impact of flood releases. It is obvious that the review of flood management issues in the Feather River will need to be closely coordinated with ongoing efforts such as the Sacramento and San Joaquin River Basins Comprehensive Study and the flood

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Mr. Len Marino
November 26, 2001
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management protection effort of the Yuba County Water Agency. As stated, this bullet does not provide a good example of a preferred alternate in the Oroville relicensing process.

W-07-22

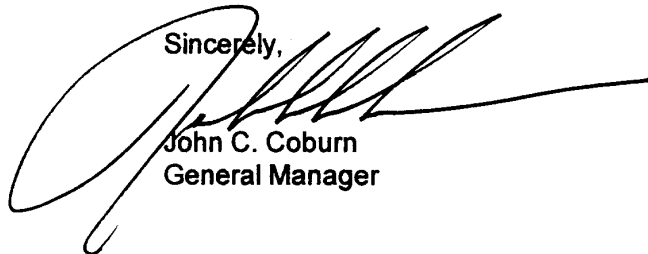
The first paragraph of Appendix C states that after the work groups review the 70 comments provided in this appendix, "these comments may be used to refine the issue statements in Sections 4.2 through 4.10 of this document." At this point in the relicensing process, it is more appropriate to use the comments to refine the study plans.

W-07-23

By means of this letter, the SWC is providing comments on the NEPA-CEQA scoping process based on information through November 26, 2001. The SWC reserves the right to comment further as additional information is developed and made available to the public and the participants in the Oroville relicensing process.

Thank you for addressing our comments on the September 27, 2001 draft of the Scoping Document.

Sincerely,



John C. Coburn
General Manager

Cc:SWC Member Agencies
SWC FERC Relicensing Ad Hoc Committee
Jim Fargo, FERC
Tim Welch, FERC
Lon Crow, FERC
Jon Cofrancesco, FERC

**CALIFORNIA DEPARTMENT OF WATER RESOURCES
OROVILLE FACILITIES RELICENSING (FERC PROJECT NO. 2100)
PUBLIC SCOPING MEETING OF OCTOBER 29, 2001**

*** Comments of Joint Water Districts
and
Western Canal Water District**

**OROVILLE FACILITIES RELICENSING (FERC PROJECT NO. 2100):
PUBLIC SCOPING MEETING OF OCTOBER 29, 2001**

*** Comments of Joint Water Districts and Western Canal Water District**

Ladies and Gentlemen:

I am Robert Fehlman, Manager of the Western Canal Water District appearing with Doak Cotter, Manager of the Joint Water Districts consisting of Richvale Irrigation District, Butte Water District, Biggs-West Gridley Water District and Sutter Extension Water District. The Joint Water Districts are located in Butte and Sutter Counties and Western Canal Water District is located in Western Butte County and Eastern Glenn County. We are appearing before you this evening specifically to request that FERC address our problem which is crop damage resulting from dramatic drops in the temperature of water delivered by DWR in its operations of the Oroville Dam and Reservoir from the Thermalito Afterbay. We ask that FERC address this problem by adopting a license provision requiring DWR to ensure deliveries of irrigation water from Thermalito Afterbay at temperatures suitable for rice propagation and production, specifically at least 65° during the four-week planting period, and at least 59° for maintenance and "tillering" water until the irrigation season is completed; i.e., on or about October 31 each year.

W-08-01

Our request is based upon DWR's obligations under its 1969 Agreement with the Joint Water Districts and its 1985 Agreement with Western Canal Water District as discussed in our letter to DWR Director Thomas Hannigan dated February 1, 2000, which I submit to you now as Exhibit "A-1 through A-24." Exhibit "A" specifically references Paragraph 6 of the 1969 Joint Water Districts - DWR Agreement which states in part as follows:

"This Agreement does not relieve State or its officers, agents or employees from liability to or from damages to Districts or third parties arising out of failure of State at any time to comply with this Agreement or the diversion schedules or notices given by Joint Manager pursuant hereto or from injuries to crops or production of crops due to reduction in temperature of water available to Districts during any portion of any Irrigation Season or seasons *as a result of water released from Lake Oroville being colder than water that would have been available in the Feather River for diversion by Districts if Oroville Dam had not been constructed.* (italics added) Nothing in this Agreement shall be construed as an admission by State that a reduction in the temperature of water available to the Districts will in fact cause injury to crops or production of crops." See **DWR-Joint Board Member Water Districts Agreement of May 27, 1969 at Paragraph 6 on Pages 16 and 17.**

**OROVILLE FACILITIES RELICENSING (FERC PROJECT NO. 2100):
PUBLIC SCOPING MEETING OF OCTOBER 29, 2001**

***Comments of Joint Water Districts and Western Canal Water District**

It is critical that irrigation water delivered pursuant to the 1969 Joint Water District/DWR Agreement and the 1985 Western Canal – P.G. & E. – DWR Water Diversion Agreement being released from the Afterbay into the river at a temperature which does not fall below 64°F during the four-week germination stage and/or planting stage for rice and does not fall below 59°F during the maintenance “tillering” stage for rice (releases under the control of DWR not inclusive of weather). Additionally, at the initial germination or planting stage, it is estimated by the Rice Experiment Station that a combination of ground and water temperature which:

- (1) falls below 50°F will kill the plant;
- (2) falls below 50°F and 55°F will produce very low germination activity causing the plant to damage or die; and
- (3) falls within 55°F to 60°F will cause low yield and seedling production.

During the initial germination stage, the temperature of the top 4-inches of soil inundated with irrigation water is critical. It is not recommended that rice be planted when the combined temperature of water and soil falls below 65°F.

Additionally, please review the brochure produced by Department of Water Resources for the State of California at the time of building Oroville Dam and Reservoir. The brochure fairly supports the reasoning we submitted to you in our letter of February 1, 2000, which is Exhibit “A.” With regard to agricultural production of rice by a number of landowners within our Districts, the brochure report states in part:

“The University of California has demonstrated that rice plants thrive best when the temperature of irrigating waters ranges from 59° to 77°F. Even within this critical range, temperature fluctuation drastically affects the harvest.

With a proper outlet structure at Oroville Dam, the temperature of releases can be controlled so as to serve the agricultural interests of the area.” See Page 11 and Page 12 of “Temperature Control of Water From Oroville Reservoir” produced by the Department of Water Resources in the early 60's.

The foregoing brochure was referenced in our letter to Director Hannigan of March 21, 2000, which is submitted as Exhibit “B-1 through B-17.” In our letter of February 1, 2000, which is Exhibit “A” we state our concerns with the obligatory contractual requirements set forth in our contracts with DWR which are mentioned in

**OROVILLE FACILITIES RELICENSING (FERC PROJECT NO. 2100):
PUBLIC SCOPING MEETING OF OCTOBER 29, 2001**

***Comments of Joint Water Districts and Western Canal Water District**

DWR Representative Jim Spence's letter of September 14, 1999 to Gary Sterns of the National Marine Fisheries Service where Mr. Spence writes:

"As described in the attached comments from the Oroville Field Division to me, assuring substantially colder water conditions in the low-flow channel to a compliance point at "Robinson Riffle" (River Mile 61.6) requires water releases to be colder, or greater, or both. Release of water cold enough to meet the objective will certainly conflict with the 1983 Agreement with California Department of Fish and Game and for "Operation of the Oroville Diversion of the State Water Project for Management of Fish and Wildlife." Such releases of cold water will also conflict with the 1969 water rights settlements with Richvale Irrigation District, Biggs-West Gridley Water District, Butte Water District, and Sutter Extension Water District. Water temperature was an important factor in the design and construction of the Thermalito Afterbay facilities. Operation outside the range of existing written agreements does not seem to me to be a "reasonable measure" involving only minor changes to the project. To some extent, large flow increases in the low-flow channel could substitute for colder initial water temperatures, but would then necessitate varying the flow in contradiction to the second basis objective - stability." See Exhibit "A" at Page 4.

Finally, we ask you to review the eight (8) examples of reduced rice production yields developed during the 1999 irrigation season due to colder water temperatures which examples are set forth @ Exhibit "A-5."

We thank you for opportunity to present our concerns to FERC and again, ask that these concerns be addressed by FERC during the relicensing of the DWR Hyatt Power Plant Facility in Oroville.

ROBERT FEHLMAN, Manager
WESTERN CANAL WATER DISTRICT

DOAK COTTER, Manager
JOINT WATER DISTRICTS BOARD

FEATHER RIVER DIVERTERS

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Representing:

Richvale Irrigation District
Biggs-West Gridley Water District
Butte Water District
Sutter Extension Water District

February 1, 2000

Director Thomas M. Hannigan
State of California
Department of Water Resources
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001

Re: DWR Obligations to Deliver Water from Thermalito Afterbay at
Temperatures Suitable for Agriculture

Dear Director Hannigan:

As you know, our office represents the Joint Water Districts and Western Canal Water District on the Feather River System. The Joint Water Districts consist of Richvale Irrigation District, Butte Water District, Biggs-West Gridley Water District and Sutter Extension Water District, located in Butte and Sutter Counties. Western Canal Water District is located in western Butte County and eastern Glenn County.

The districts are concerned about crop damage resulting from dramatic drops in the temperature of water delivered to them by DWR from the Thermalito Afterbay. Prior to the commencement of the 2000 irrigation season (which could occur as early as April), they request assurance that DWR will work to ensure deliveries of irrigation water from Thermalito Afterbay at temperatures suitable for rice propagation and production, specifically at least 65° during the four-week planting period, and at least 59° for maintenance and "tillering" water until the irrigation season is completed, *i.e.*, on or about October 31. That request is based upon DWR's obligations under its 1969 agreement with the Joint Water Districts, and its 1985 agreement with Western Canal Water District, as discussed in more detail below. DWR's May 27, 1969 Agreement with the Joint Water Districts was entered into inter alia to settle the Joint District's

W-08-02

EXHIBIT "A" PG 1 OF 24

To: Director Thomas M. Hannigan
State of California, Dept. of Water Resources
From: Feather River Diverters: Joint Water Districts, Western Canal Water District
Date: February 1, 2000

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protests to the State of California's Junior Water Rights status allowing the building of the State Water Project's Oroville Dam and Reservoir. As a part of the 1969 Joint District Agreement, DWR and the Joint Districts negotiated the temperatures reasonably related to achieving agricultural production within the Joint Water District service area. Paragraph 6 of the 1969 Agreement states in part as follows:

"This Agreement does not relieve state or its officers, agents or employees from liability to or from damages to districts or third parties arising out of failure of State at any time to comply with this Agreement or the diversion schedules or notices given by Joint Manager pursuant hereto or from injuries to crops or production of crops due to reduction of temperature of water available to Districts during any portion of any irrigation season or seasons *as a result of water released from Lake Oroville being colder then water that would have been available in the Feather River for diversion by districts if Oroville Dam had not been constructed.* (italics added) Nothing in this Agreement shall be construed as an admission by State that a reduction in the temperature of water available to the Districts will, in fact, cause injury to crops or production of crops."

See DWR-Joint Board Member Water Districts Agreement of May 27, 1969 at Paragraph 6 on Pages 16 and 17.

The 1985 WCWD - PG&E - DWR Water Diversion Agreement was a successor to the May 27, 1969 DWR - Pacific Water Delivery Agreement. Although the 1985 Agreement does not contain language as specific as paragraph 6 of the Joint District - DWR 1969 Agreement, paragraph 4(c) of the WCWD - PG&E - DWR 1985 Agreement is specific that DWR is not released from liability for colder water temperatures distributed to WCWD; and the crops grown in both service areas are similar. It is critical that irrigation water delivered pursuant to the above contract be released from the Afterbay into the river at a temperature which does not fall below 64°F during the four-week germination stage and/or planting stage for rice and does not fall below 59°F during the maintenance or "tillering" stage for rice (releases under the control of DWR not inclusive of weather). Additionally, at the initial germination or planting stage, it is estimated by the Rice Experiment Station that a combination of ground and water temperature which:

- (1) falls below 50°F will kill the plant;
- (2) falls below 50°F and 55°F will produce very low germination activity causing the plant to damage or die; and
- (3) falls within 55°F to 60°F will cause low yield and seedling production.

During the initial germination stage, the temperature of the top 4-inches of soil inundated with irrigation water is critical. It is not recommended that rice be planted when the combined temperature of water and soil falls below 65°F.

EXHIBIT "A" PG 2 OF 24

To: Director Thomas M. Hannigan
State of California, Dept. of Water Resources
From: Feather River Diverters: Joint Water Districts, Western Canal Water District
Date: February 1, 2000

Page 3

During the "tillering" or rice maintenance stage; i.e., single rice plants start to multiply producing additional stands; it is critical that combined water and soil temperature not fall below 59°F.

COLDER WATER RELEASES

Our concerns are generated by the enclosed July 14, 1999 comments from NOAA/NMFS together with the attached fax of the same date from Michelle Simpson to Dave Robinson of the USBR and Zachary Hymanson of DWR. Particularly on page 2 of the fax from Michelle Simpson she makes the following 4 points with regard to the Feather River:

- Manage reservoir releases from June 1 through September 30 with the goal of achieving a daily average water temperature below 60°F in the reach between the Fish Barrier Dam and Robinson Riffle (RM 61.6). During short periods (2-15 days) of high ambient air temperatures, reservoir releases may be managed to maintain daily average water temperatures between 60°F and 65°F at RM 61.6. If water temperatures rise to a daily average of 68°F or greater for two consecutive days, Reclamation/DWR shall immediately notify NMFS to evaluate potential operational modifications necessary to provide cooler temperatures.
- To monitor temperature conditions, the DWR must utilize an automatic temperature recording device in the Feather River at RM 61.6 for steelhead. The device must be capable of recording water temperature at 1 to 2 hour intervals on a 24-hour basis. Water temperature data must be transmitted to NMFS on a weekly basis via facsimile (Gary Stern; Fax 707-578-3435).
- Stability criteria for the volume of flow released to the Low Flow Channel: flows are not decreased more than 15% per day and not more than 2% per hour. When flood releases can be anticipated, efforts shall be made to minimize rapid increases in flow to the low flow channel. When possible flows are not increased more than 100% per day and not more than 10% per hour.
- Continue and expand monitoring within the Feather River to:
 - (1) establish the presence, residence time, immigration, and emigration periods of adult and juvenile steelhead and chinook salmon; and
 - (2) measure temperature and flow conditions year-round. The monitoring program proposal submitted for review and approval by September 1, 1999.

EXHIBIT "A" PG 3 OF 24

To: Director Thomas M. Hannigan
State of California, Dept. of Water Resources
From: Feather River Diverters: Joint Water Districts, Western Canal Water District
Date: February 1, 2000

Page 4

Not only are the above comments advocating a violation of the obligatory language of the '69 Agreement with the Joint Water Districts and the spirit of the 1985 Agreement with WCWD; they are betraying an intention of third party public agencies asking DWR to breach the Agreement and to harm water users dependent on agricultural water supplies delivered out of Lake Oroville for the production of rice and other similarly grown crops.

W-08-03

You were aware of this same problem, we believe, in your letter of September 14, 1999 written by Jim Spence, the Chief of the Project Operations Planning Branch for the State Water Project Control Office and addressed to Gary Stern of the National Marine Fisheries Service in Santa Rosa. The same letter written by Spence was directed to Michelle Simpson of NMFS, and Jim White of the State of California Department of Fish and Game. In Mr. Spence's September 14, 1999 letter to Gary Stern of NMFS, he writes in part that:

"As described in the attached comments from the Oroville Field Division to me, assuring substantially colder water conditions in the low-flow channel to a compliance point at "Robinson Riffle" (River Mile 61.6) requires water releases to be colder, or greater, or both. Release of water cold enough to meet the objective will certainly conflict with the 1983 agreement with California Department of Fish and Game for "Operation of the Oroville Division of the State Water Project for Management of Fish and Wildlife." *Such releases of cold water will also conflict with the 1969 water rights settlements with Richvale Irrigation District, Biggs-West Gridley Water District, Butte Water District, and Sutter Extension Water District. Water temperature was an important factor in the design and construction of the Thermalito Afterbay facilities. Operation outside the range of existing written agreements does not seem to me to be a "reasonable measure" involving only minor changes to the project.*

To some extent, large flow increases in the low-flow channel could substitute for colder initial water temperatures, but would then necessitate varying the flow in contradiction to the second basic objective - stability."
See letter of September 14, 1999 from Jim Spence, Chief of Project Operations Planning Branch State Water Project Control Office to Gary Stern of National Marine Fisheries Service.

Colder water temperatures experienced by Joint Water Districts and WCWD service area landowners during the 1999 irrigation season caused reduced rice production yields on a per acre basis, including the following examples:

EXHIBIT "A" PG 4 OF 24

To: Director Thomas M. Hannigan
State of California, Dept. of Water Resources
From: Feather River Diverters: Joint Water Districts, Western Canal Water District
Date: February 1, 2000

Page 5

Example #1

Memorandum #1 reviews RID Landowner Gerald "Butch" Mattson taking water from the Afterbay through the Richvale Canal in: 1) a 300 acre field; 2) a 270 acre field; and 3) an 80 acre field together with colored photographs showing dead rice due to cold water temperatures.

Example #2

Memorandum #2 reviews BWGWD Landowner John "Chuck" Adams suffering colder water temperatures at the intake channel off of the Biggs-West Gridley Canal together with a map which shows dead rice in a 146 acre field consisting of 25 acres in #1 and #2.

Example #3

Memorandum #3 reviews cold water temperatures in the 1999 irrigation season incurred by WCWD Landowner LaMalfa Farms causing reduced yield and rice crop damage.

Example #4

Memorandum #4 reviews RID and BWGWD Landowner James Sligar in suffering reduced rice crop yield due to colder water temperatures.

Example #5

Memorandum #5 reviews RID Landowner Lyle Job suffering cold water temperature damage to approximately 150 acres in 1999 causing reduced yields and crop damage.

Example #6

Memorandum #6 is a map which reviews WCWD and RID Landowner Gary Lindberg with cold water temperatures suffering reduced crop yields in both the east and west side of a 314 acre field divided into three sections.

Example #7

Memorandum #7 is a 1999 graph showing the difference between Thermalito Feather River Hatchery water deliveries and Afterbay Outlet water temperatures from February 28, 1999 through September 26, 1999. The temperature difference on 6/28/99 is 16 degrees; i.e., 54 degrees @ the Hatchery and 70 degrees @ the Afterbay Outlet.

Example #8

Memorandum #8 is a twenty (20) year graph supplied by the DWR Oroville Field Division which identifies the trend toward colder water released from Lake Oroville (commencing January 1980 through January 2000). A more dramatic drop in water temperatures started in January 1993.

EXHIBIT "A" PG 5 OF 24

To: Director Thomas M. Hannigan
State of California, Dept. of Water Resources
From: Feather River Diverters: Joint Water Districts, Western Canal Water District
Date: February 1, 2000

Page 6

We urge you to deliver a written communication to the authors of these memos at NOAA/NMFS and specifically to Michelle Simpson, Dave Robinson and Zachary Hymanson of the respective USBR and DWR Offices requesting that they assist DWR in ensuring that water temperatures delivered to both the Joint Water District Members and WCWD service areas are delivered and distributed in reasonable compliance with the water temperature level set forth in this letter pursuant to the obligations expressed in the Joint Water District 1969 Agreement and the Western Canal Water District 1985 Agreement with DWR. May we please have your response within the next twenty (20) business days which will adequately precede the commencement of the year 2000 irrigation season. Thank you and we trust that we may have your written consent and position on this subject.

Very truly yours,

FEATHER RIVER DIVERTERS

JOINT WATER DISTRICTS

Richvale Irrigation District

By: Gene Harris
Gene Harris - President

Sutter Extension Water District

By: Ronald Harrington
Ronald Harrington - Chairman

Biggs-West Gridley Water District

By: Ralph R. Cassady
Ralph R. Cassady - President

WESTERN CANAL WATER DIST.

By: Matt Colwell (MANAGER)
FOR: Lance Tennis - President

Butte Water District

By: Gregg Correa
Gregg Correa - Vice President

Enclosures

cc: National Oceanic and Atmospheric Administration
National Marine Fisheries Service
California Department of Fish and Game
United States Fish and Wildlife Service

MEMORANDUM - EXAMPLE #1

TO: FILE

FROM: WHB

DATE: January 10, 2000

RE: Butch Mattson - Proposed letter to DWR - Cold Water Temperatures

I conferred with Gerald "Butch" Mattson this morning and reviewed his "not to scale" draft diagram of taking water from the Afterbay through the Richvale Canal and then southerly to first, his intake at a 300-acre field and then to his intake at a 270-acre field. His third field takes water out of the Western Supply Ditch on the south side of Richvale Hwy. to an intake channel to his 80-acre field where he has a 2-3 acre leveed warming ditch.

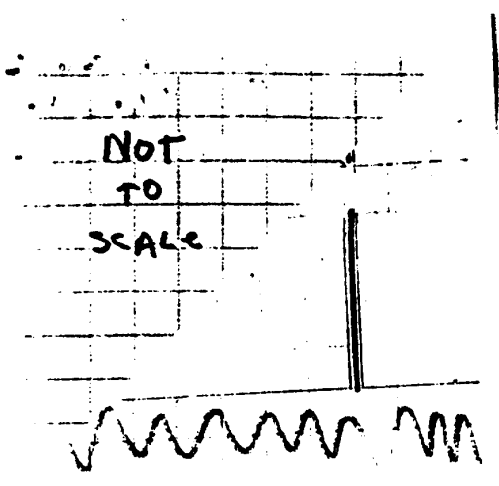
The 80-acre field takes about 2-3 hours to run water through the warming pond which is at the southeast corner of the field and takes water right out of the intake channel from the Western Supply Ditch at approximately 56° - 58°. The warming pond probably takes 5° - 8° off the cold water temperature and grows rice but does not produce any rice for the entire 2 - 3 acres. Butch says he started the pond 6 - 7 years ago in an attempt to control colder water temperatures coming out the Afterbay. His yield average in 1999 on the 80-acre field was 106 sacks green and 94 dry with no rice harvested on the 2 - 3 acre warming pond area.

Butch's second field is the 300-acre field which has a 5 - 6 acre warming pond built in approximately 1995 to control cold water. Rice was planted but now growth in the entire 5 - 6 acres and water coming from the intake channel is estimated at 58° and warmed to approximately 66° in the 5 - 6 acres before applied on the balance of the 300-acre growing area. In 1999 rice yields were 86.5-acres dry with rice planted but killed on the entirety of the 5 - 6 acres.

The third 270-acre field has no leveed warming pond because the landlord (Wehas Farms) said the levee area produces weeds which encroaches on rice production in other areas so the levee was taken down. Still, 5 - 6 acres is planted to rice but grows no rice and the temperature at the intake channel is 58° with another 66° - 67° where it comes out of the 5 - 6 acre into the balance of the field.

I've marked 7 photos taken on December 30, 1999 by Mattson which chronologically show the introduction of water from the Afterbay through the Richvale Canal and into each of the three fields which shows the area of ground tilled by cold water temperatures.

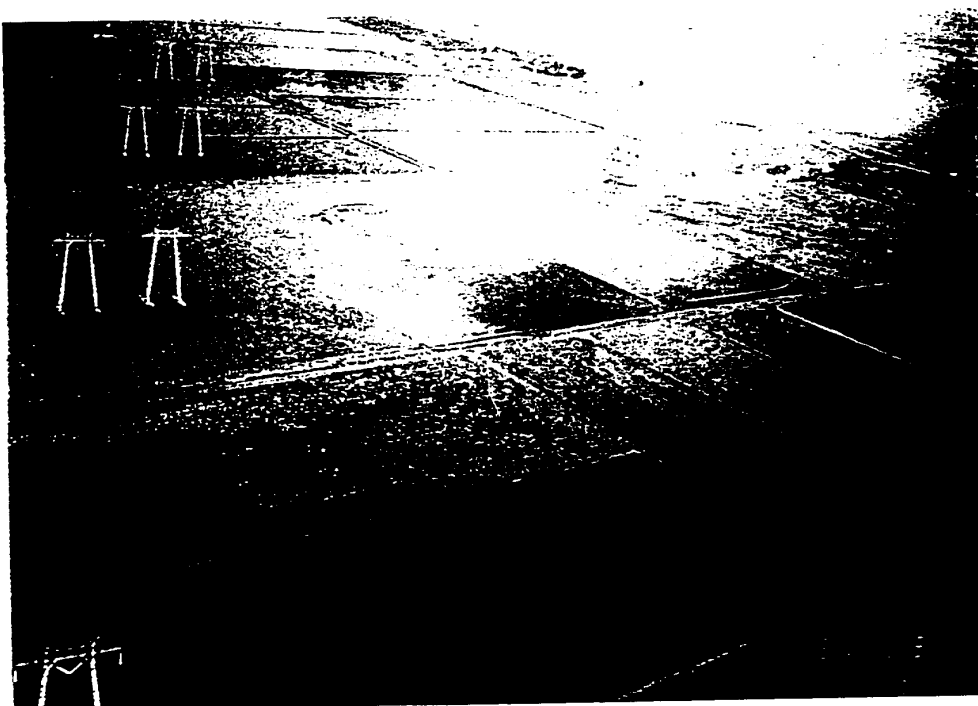
W-08-04



#1 - 12/30/99
Western and
Richvale Canals



#2 - 12/30/99
80-acre field shows levee to control
and warm water: Gerald Mattson

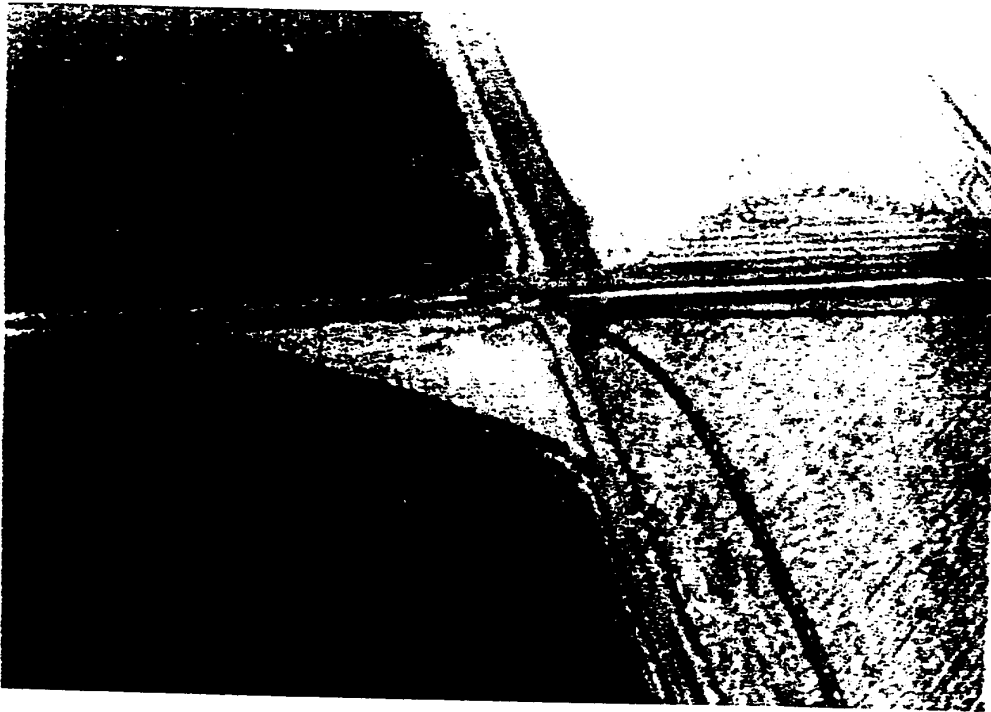




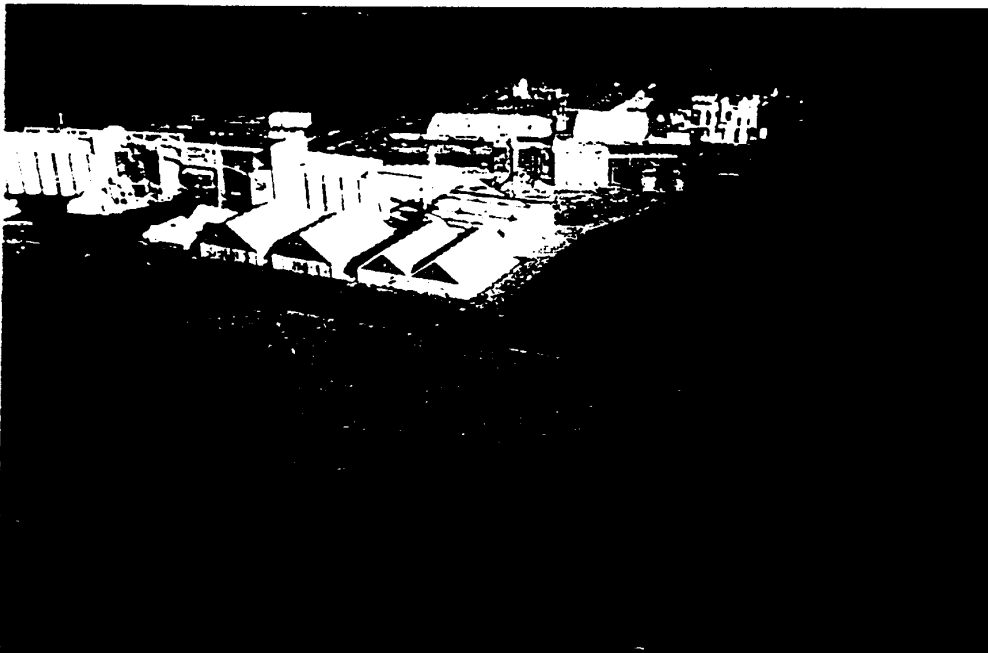
#3 - 12/30/99
Shows 270-acre field with
5-6 acres of dead rice



#4 - 12/30/99
Shows cold water
unharvested rice

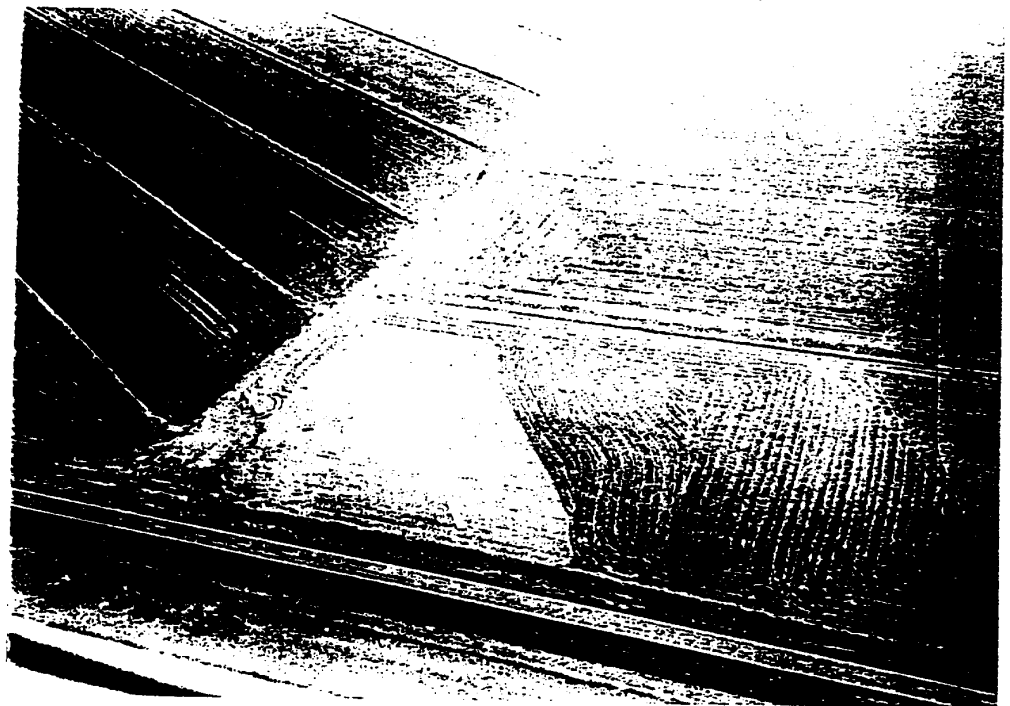


#6 - 12/30/99
Shows cold water
unharvested rice



#5 - 12/30/99
Shows cold water
unharvested rice

#7 - 12/30/99
Shows cold water
unharvested rice



MEMORANDUM - EXAMPLE #2

TO: FILE

FROM: WHB

DATE: January 10, 2000

RE: Chuck Adams - Proposed letter to DWR - Cold Water Temperatures

I reviewed the map and areas 1 and 2 provided me by Chuck Adams through the mail today. They show a 146-acre field looking just westerly of Biggs-West Gridley Road but doesn't provide documentation on the map as to acres in the areas impacted. I called Chuck and he advised as follows:

1. Field #1 is approximately 15-acres and Field #2 is approximately 10-acres. All a part of the 146-acre field.
2. The intake channel on the Biggs-West Gridley Canal is approximately one-quarter mile off of Farris Road. The temperature of the water at the intake channel was always less than 60° at all times of release into the field during the irrigation season.
3. He never constructed ponds.
4. The cold water problem commenced gradually over the last 10-years.

W-08-05

76.5

150.8

Area #1 has zero
yield

Area #2 has 40 cwt
or less yield

SPRINGS ROAD

T158

NHCL

2.
65.8

T15249

T15732

NHCL

152

T15220

T15732

NHCL

T1424

146 acres

70141

228

250

NHCL

5.
12.1

3.

36.2

MEMORANDUM - EXAMPLE #3

TO: FILE

FROM: WHB

DATE: January 20, 2000

RE: Statement of Milton LaMalfa - Proposed letter to DWR - Cold Water Temperatures

1999 RICE CROP YEAR
at LaMalfa Farms

Attached is a map showing LaMalfa Farms Rice Fields located north of Richvale Hwy. West and on the west side of Hwy. 99. The Afterbay is directly across from us on the east side of Hwy 99. The outlet from the Afterbay for Western Canal and Richvale Canal is also across from our farm. Our field deliveries are the first ones on the canals coming from the Afterbay.

When the Afterbay was built we were told it was a warming pond and in the DWR negotiations and contracts. We would be delivered water at least the same temperature as we had been receiving from the Feather River in the past and could even be warmer.

The first year water was delivered from the Afterbay we noticed several acres of rice blanked out at each inlet off the canal due to cold water. Other farmers down the canal all had the same problems. Complaints were made but did not help much so in the following years we established our own warming ponds sizing them to match the areas that the rice blanked out.

These areas are indicated by the light green color on the attached map. The size of each area is determined by the volume of water needed to irrigate the fields. We stopped putting seed, fertilizer and chemicals in these areas because of zero yield to pay for them. But we still pay land payments, insurance, county taxes and water on these areas with no return. Within these warming ponds we put dykes in to make the water circulate or zig zag - giving it more time to be warmed by the sun during the day (not much help at night). The attached map is not to scale but I will give you the measured sizes indicated by the green color.

Field #4 and #40 - 3 acres. Field #1 - 5.7 acres. Field #142 - 3 acres. Field #66 - 2.5 acres. Field # 50 - 2.5 acres. Field #10 - 3 acres. Field #30 - 1.5 acres. Field #48 - 2.5 acres.

This year the rice blanked out past our warming ponds indicated by the pink areas on the map. The blanked out areas were larger than the warming areas. We found out that the water temperature was 5° colder than in the past. Last year we noticed some blanking outside the warming ponds but not as severe. Here are the blanked acreage (not pink area) by field. Field #4

W-08-06

and Field #40 - 6 acres. Field #1 - 7 acres. Field #142 - 8 acres. Field #66 - 6 acres.
Field #50 - 5 acres. Field #10 - 8 acres. Field #30 - 4 acres. Field #48 - 9 acres.

W-08-06

Our production costs for these acres are \$300 to \$350 per acre depending on weed control problems (weeds are harder to control in colder water). These costs bring us to harvest. Now we have no harvest - having drying and storage costs in those spots but we still have to come back and chop the straw and incorporate it into the soil and flood to decompose the straw since burning straw is almost gone. This decomposition cost is \$45 per acre.

53 acres loss x \$350 per acre = \$18,550.00

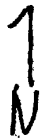
53 acres straw decomposition = 2,385.00

This is 53 more acres not paying taxes, insurance and mortgage payments. The insurance costs for owning this farm and farming is \$22.63 per acre. Our Butte County Taxes on this farm cost is \$30.90 per acre.

There are more farms down the canal that can show the same information as I have here.

LAMALFA FARMS 1999

WESTERN CANAL



CHEROKEE DRAIN

#49

#48

#60

#44

#30

#10

#50

#66

#11

RICHVALE CANAL

#142

#3

#2

#1

#13

#6

#5

#40

#100

#4

9881

RICHVALE HWY

EXHIBIT "A" m17 & 14 Hwy 162 ET

AFTER DRAIN
OUT LETS FOR
WESTERN CANAL
RICHVALE CANAL

Hwy 162

AFTER DRAIN

MEMORANDUM - EXAMPLE #4

TO: FILE
FROM: WHB
DATE: January 21, 2000
RE: Statement of James J. Sligar - Proposed letter to DWR - Cold Water Temperatures

I have been farming rice in the Biggs-West Gridley and Richvale Irrigation Districts portion of Butte County since 1973.

Over the course of these years I have always experienced some minor problems with "cold water intake checks," associated with the temperature of the water being delivered by the aforementioned water districts, these problems were usually confined to the top 2% of the field. But starting a few years back the temperature of the water delivered by the districts has dropped considerably thereby drastically increasing the problems associated with cold water intakes; i.e., poor seedling germination, poor seeding vigor, reduced tillering resulting in poor stand establishment and increased blanking associated with colder day and nighttime relative temperatures in the effected areas.

Now, the effected cold water areas instead of being confined to 2% of the field have grown to approximately 15-18% of the field in fields located in the top end of the water districts.

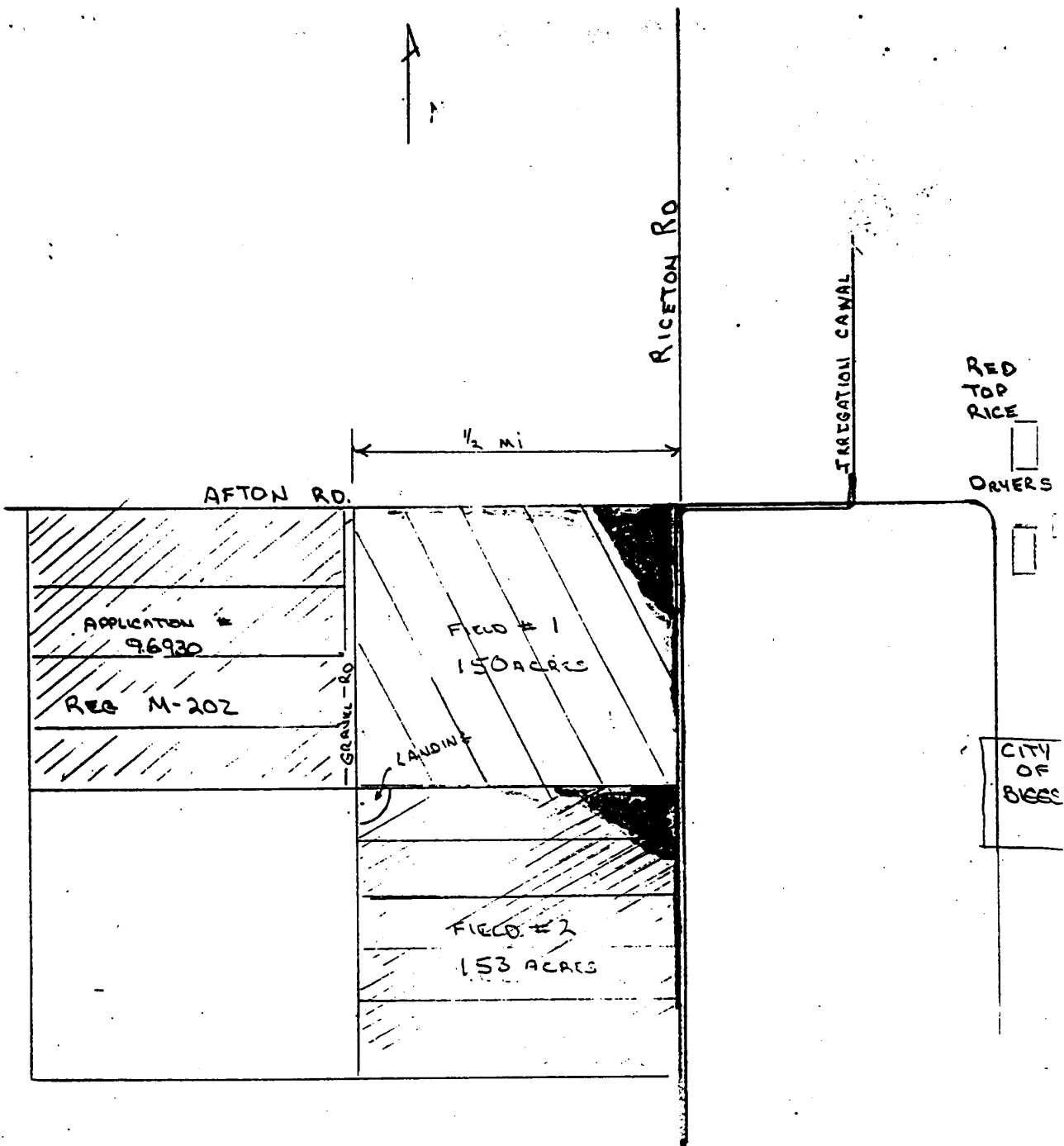
As an example my "overall" average yield for 1999 was 87.9 cwt/acre. But yields in fields planted at the top end of the district which experience my worst cold water effects were 80.1 cwt/ac. for field #1 Exhibit "A" and 79.5 cwt/ac. for field #2 Exhibit "A." These yields are 8 cwt/ac. below my average yields and 15-18 cwt below fields which experience no cold water intake effects.

Since both fields are 150-acres in size, this represents a minimum 2,400 cwt less rice to sell or approximately \$24,000 less income.

I think it is imperative that the State live by its previous contract commitments and deliver rice growers water at temperatures previously agreed to.

W-08-07

EXHIBIT "A" PG 18 OF 24



EXAMPLE #5

COLD WATER DAMAGE

1999 Rice Crop on L & L Farms
prepared by Lyle Job

I farm three separate parcels in the Richvale Irrigation District which receive irrigation water under different applications. I will explain each parcel and how it is affected by cold water delivery.

Parcel 226: Contains 22.6 acres of farmable rice acres which receives its water from a district lateral and a required bottom gate (producing colder water compared to a top of ditch service). Yield on this parcel for 1999 was 34.68 cwt. per acre of M401 rice. This parcel is farmed, planted, and harvested under all the same time frame as parcel 406 which borders parcel 226 on the east side.

Parcel 406: Contains 40.6 acres of farmable rice acres which receives its water from a private lateral and is a shallow ditch approximately 1/2 mile in length providing a surface service and an area for warming. Yield on this parcel for 1999 was 73.99 cwt. per acre of M401 rice. As stated above this parcel is farmed under the same time frame as parcel 226 yet producing 39.31 cwt. per acre more in yield.

Parcel 82: Contains 82 acres of farmable rice acres which receives its water from a district lateral five miles west of parcels 226 and 406. Therefore allowing warming to occur in the ditch before reaching the parcel's water delivery point. Yield for 1999 was 85.76 cwt. per acre of M204 rice. This parcel was a different variety but Rice Research Station data shows comparable yields in adjoining test plots.

Attached is map showing the location of parcels 226 and 406 in relationship to the main canal and each other. As stated above there were no differences in farming practices, fertilizer application, irrigation levels, planting dates, chemical applications, draining dates, harvest conditions and dates, and drying/storage practices.

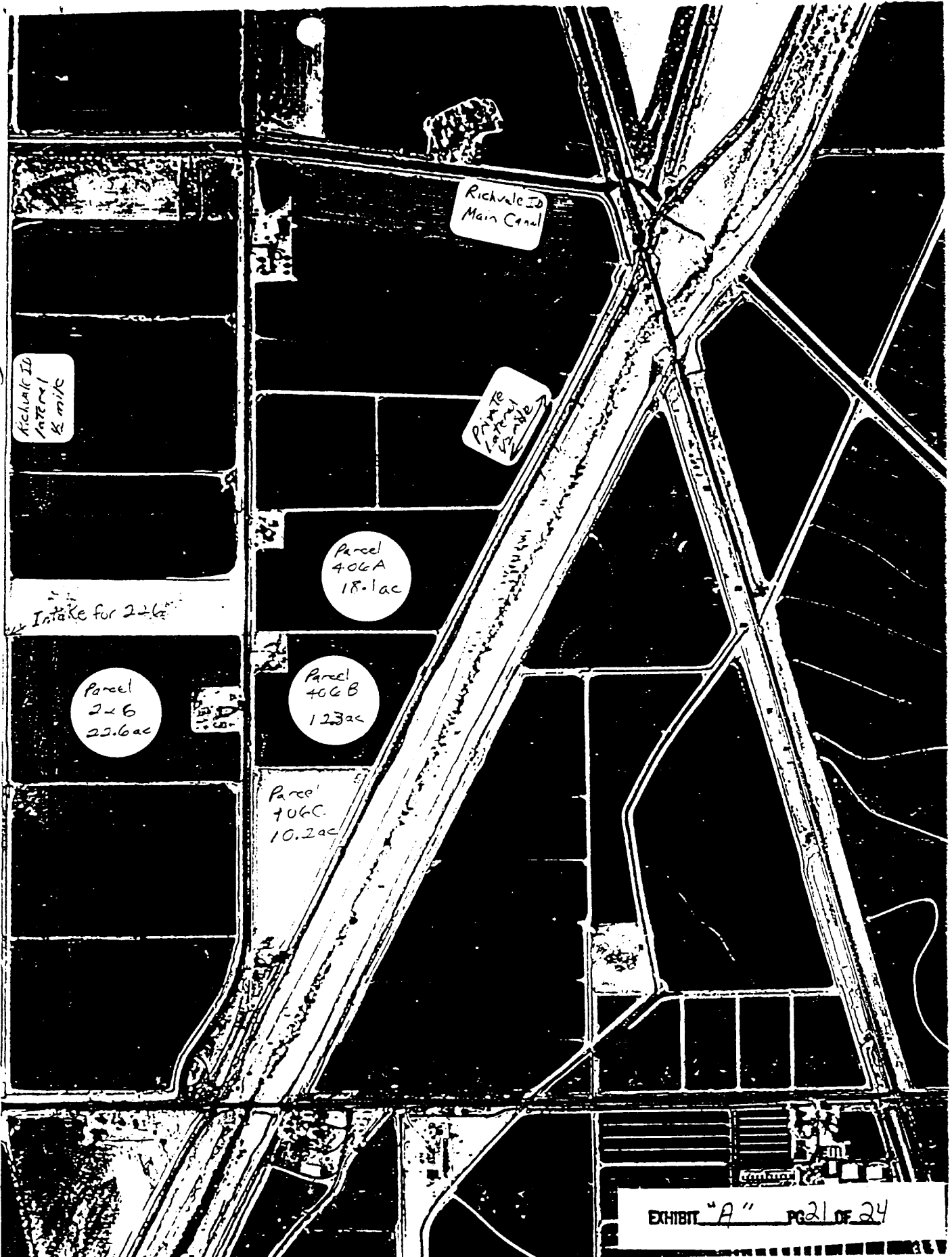
The intake area(approx. 2 acres) of parcel 226 was totally blanked and was unharvestable. The remaining acres had approximately 50% blanking and harvest moistures where higher due to immature kernels. Also attached are paddy rice confirmations showing those moistures and yield data.

I have personally communicated with 10 other growers that are willing to provide data of the same degree as I have submitted so in my opinion this not an isolated problems. I did not include financial data as we market our rice over the next year and final returns will not be available until January of 2001. Estimated financial losses could be provided if litigation starts before that time.

Sincerely,

Lyle Job

W-08-08



EXAMPLE #6

G2L Farms (Gary Lindberg)

Field 314 - Grell

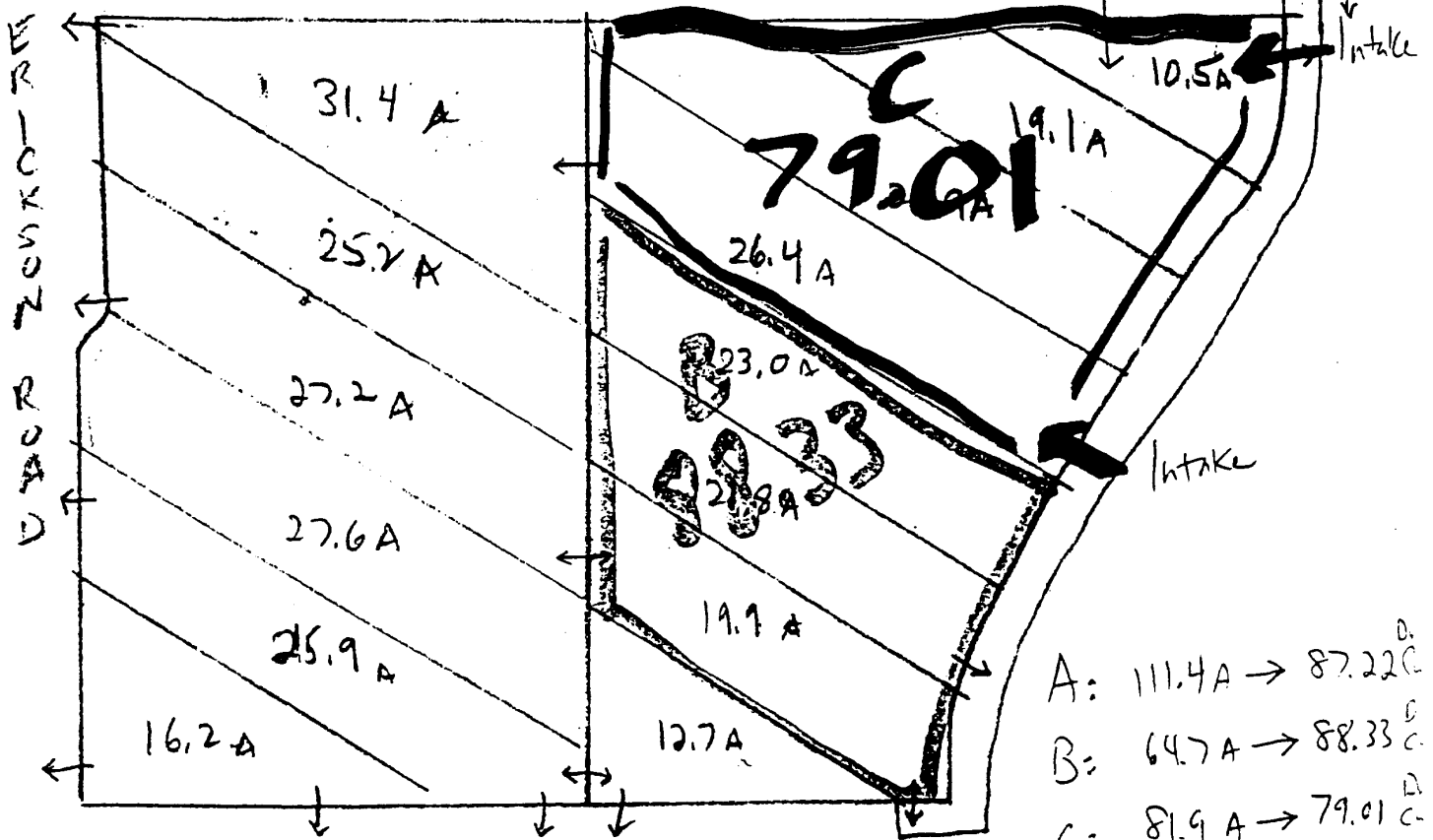
312.8 A Farmable

↔ Intake/Drain
← Drain

WESTERN CANAL 549L

(N)

10.5A Intake
Check yielded
55.11 green & 25.9% moisture

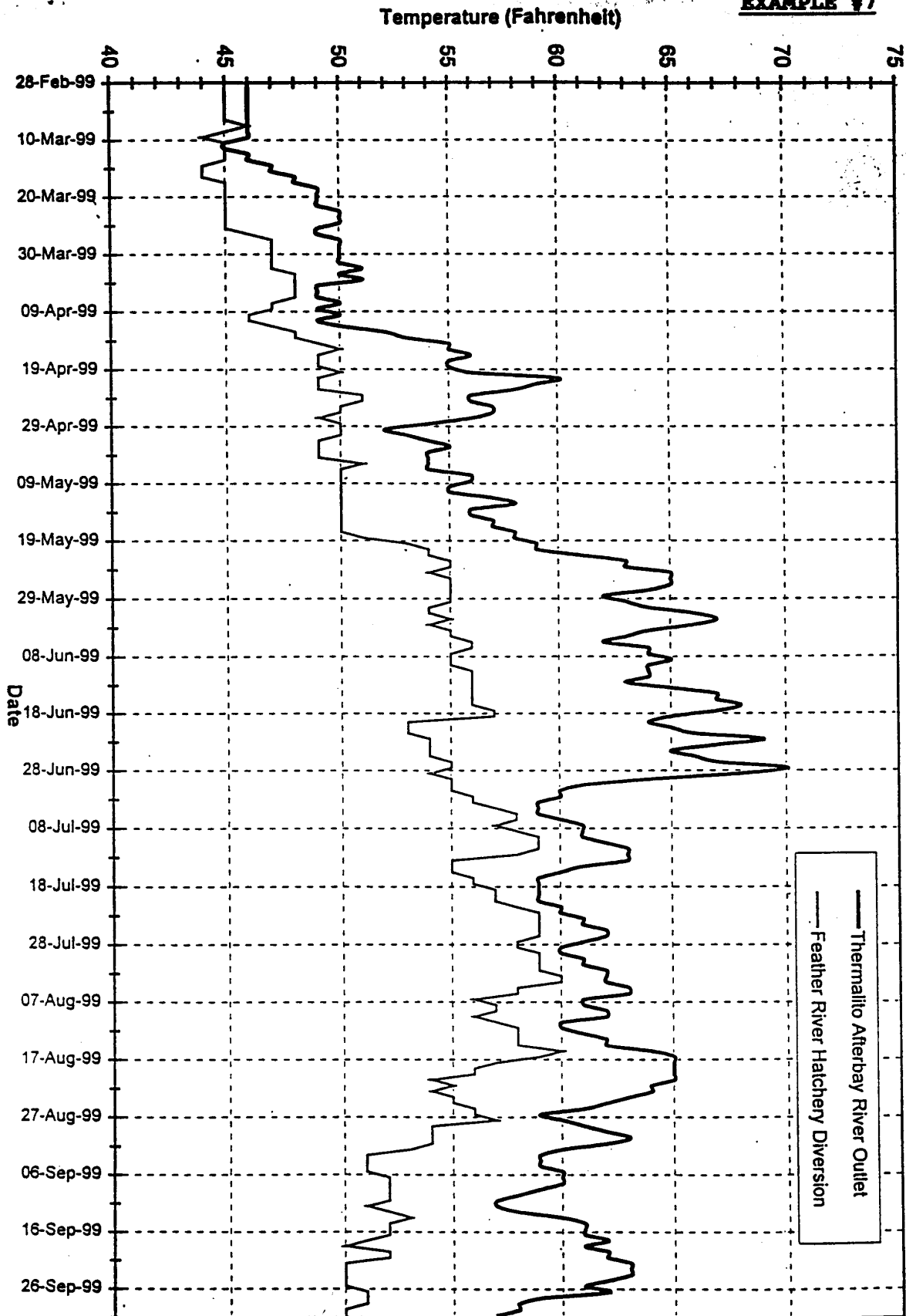


A: 111.4A → 87.22C
B: 64.7A → 88.33C
C: 81.9A → 79.01C

153.5 A (West Side)

159.3 A (East Side)

Oroville Complex Temperatures



Average Monthly Feather River Outlet Water Temperature

Data Supplied By:
California Department Of Water Resources
Orville Field Division

■ Average Temperature
— Linear Trendline

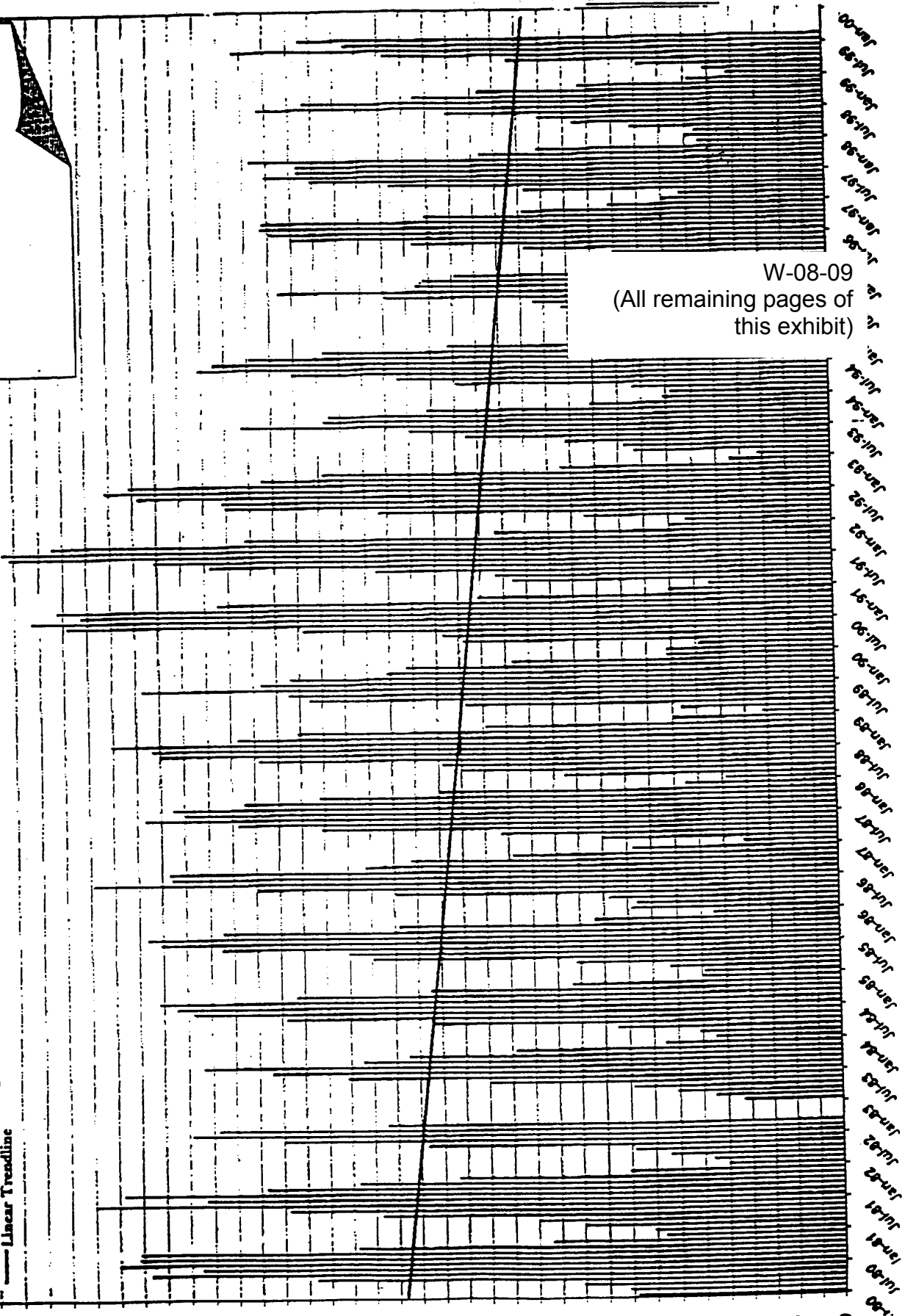


Exhibit B

FEATHER RIVER DIVERTERS

JOINT WATER DISTRICTS

735 Virginia Street
Gridley, California 95948
Telephone: (530) 846-3307

WESTERN CANAL WATER DISTRICT

P.O. Box 190
Richvale, California 95974
Telephone: (530) 342-5083

Representing:

Richvale Irrigation District
Biggs-West Gridley Water District
Butte Water District
Sutter Extension Water District

March 21, 2000

Director Thomas M. Hannigan
State of California
Department of Water Resources
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001

Re: DWR Obligations to Deliver Water from Thermalito Afterbay at
Temperatures Suitable for Agriculture

Dear Director Hannigan:

We wrote you a letter dated February 1, 2000 regarding the above DWR obligation to deliver water from Thermalito Afterbay at temperatures suitable for agriculture. We have not as yet had your response and the year 2000 irrigation season is fast approaching.

During the interim period of time between February 1 and the date of this letter, and during our ongoing preparation for what we presume will be the commencement of Phase 8 of the Bay-Delta Hearings sometime later this year, we discovered the enclosed 14-page brochure produced by DWR entitled "Temperature Control of Water From Oroville Reservoir." The brochure was apparently developed and released during Governor Edmund G. "Pat" Brown's term as Governor of California and your predecessor, Bill Warnes's term as DWR Director. Both men presided during the building of Oroville Dam and reservoir in the early 60's.

A reading of the enclosed brochure produced at the time of building Oroville Dam and reservoir fairly supports the reasoning we submitted to you in our letter of February 1. For example, page 5 states:

"The California Department of Water Resources has studied the potentially detrimental effects of cold water releases from the depths of Oroville reservoir upon local crops, fisheries, and recreation.

To: Director Thomas M. Hannigan
State of California, Dept. of Water Resources
Re: DWR Obligations to Deliver Water from Thermalito Afterbay
at Temperatures Suitable for Agriculture
Date: March 21, 2000

Page 2

Concluding that a means must be found to control the temperature of releases from Oroville reservoir so as to meet the diverse needs of a cold-water and a warmwater fishery, of rice growers, and of swimmers, snorklers, and water skiers, the Department set about to find that means.

This booklet describes the problems involved and reports on the solution discovered." See Page 5 of "Temperature Control of Water From Oroville Reservoir" produced by the Department of Water Resources in the early 60's.

With respect to the impacts of "cold water" on the Feather River Fishery, the enclosed report states:

"In the past, rivers and streams near Oroville have been considerably warmer. They have averaged from 52°F on May 1 to 72°F in August. The existing fishery has flourished in these warmer waters. The Department of Water Resources intends to see that cold water releases from Oroville reservoir do not harm that fishery." See Page 7 of "Temperature Control of Water From Oroville Reservoir" produced by the Department of Water Resources.

With respect to the subject of fish, the enclosed states:

"The Feather River abounds in warmwater gamefish: striped bass, largemouth and smallmouth bass, shad, and catfish. During their growing season -- April through October -- these fish thrive best in waters averaging 60° to 75°F." See Page 9 of "Temperature Control of Water From Oroville Reservoir" produced by the Department of Water Resources in the early 60's.

With regard to agricultural production of rice by a number of landowners within our Districts, the enclosed report states in part:

"The fields of the Feather River Service Area will be irrigated by releases from Oroville reservoir. Rice production is important to the economy here; and irrigation water temperature is a critical factor in rice growth.

Cold water released from the depths of Oroville reservoir would harm the rice crop. Even without Oroville Dam, water temperatures of the Feather River are not ideal for rice growth. Their average May through August range has been from 52° to 72°F.

EXHIBIT "B" PG 2 OF 17

To: Director Thomas M. Hannigan
State of California, Dept. of Water Resources
Re: DWR Obligations to Deliver Water from Thermalito Afterbay
at Temperatures Suitable for Agriculture
Date: March 21, 2000

Page 3

The University of California has demonstrated that rice plants thrive best when the temperature of irrigating waters ranges from 59° to 77°F. Even within this critical range, temperature fluctuation drastically affects the harvest.

With a proper outlet structure at Oroville Dam, the temperature of releases can be controlled so as to serve the agricultural interests of the area." See Page 11 and Page 12 of "Temperature Control of Water From Oroville Reservoir" produced by the Department of Water Resources in the early 60's.

Again, Director Hannigan, we urge you to deliver a written communication to the authors of the memos sent you which we identify in our letter to you of February 1, 2000. Please advise NOAA/NMFS, USBR, USFWS and DFG to assist DWR in ensuring that water temperatures delivered to both the Joint Water District Members and WCWD Service Areas are delivered and distributed in reasonable compliance with the water temperature level set forth not only in our letter to you of February 1 but also in your own enclosed document entitled "Temperature Control of Water From Oroville Reservoir." We understand the press of business at DWR but we would appreciate a response within the next ten (10) business days so that we may know of DWR's position on this critically important subject in accord with our 1969 and 1985 Agreements and prior to the start of the year 2000 irrigation season.

Very truly yours,

FEATHER RIVER DIVERTERS

JOINT WATER DISTRICTS

Richvale Irrigation District

By: 

Gene Harris - President

Sutter Extension Water District

By: 

Ronald Harrington - Chairman

Biggs-West Gridley Water District

By: 

Ralph R. Cassady - President

WESTERN CANAL WATER DIST.

By: 

Lance Tennis - President

Butte Water District

By: 

Robert Waller - President

Enclosure

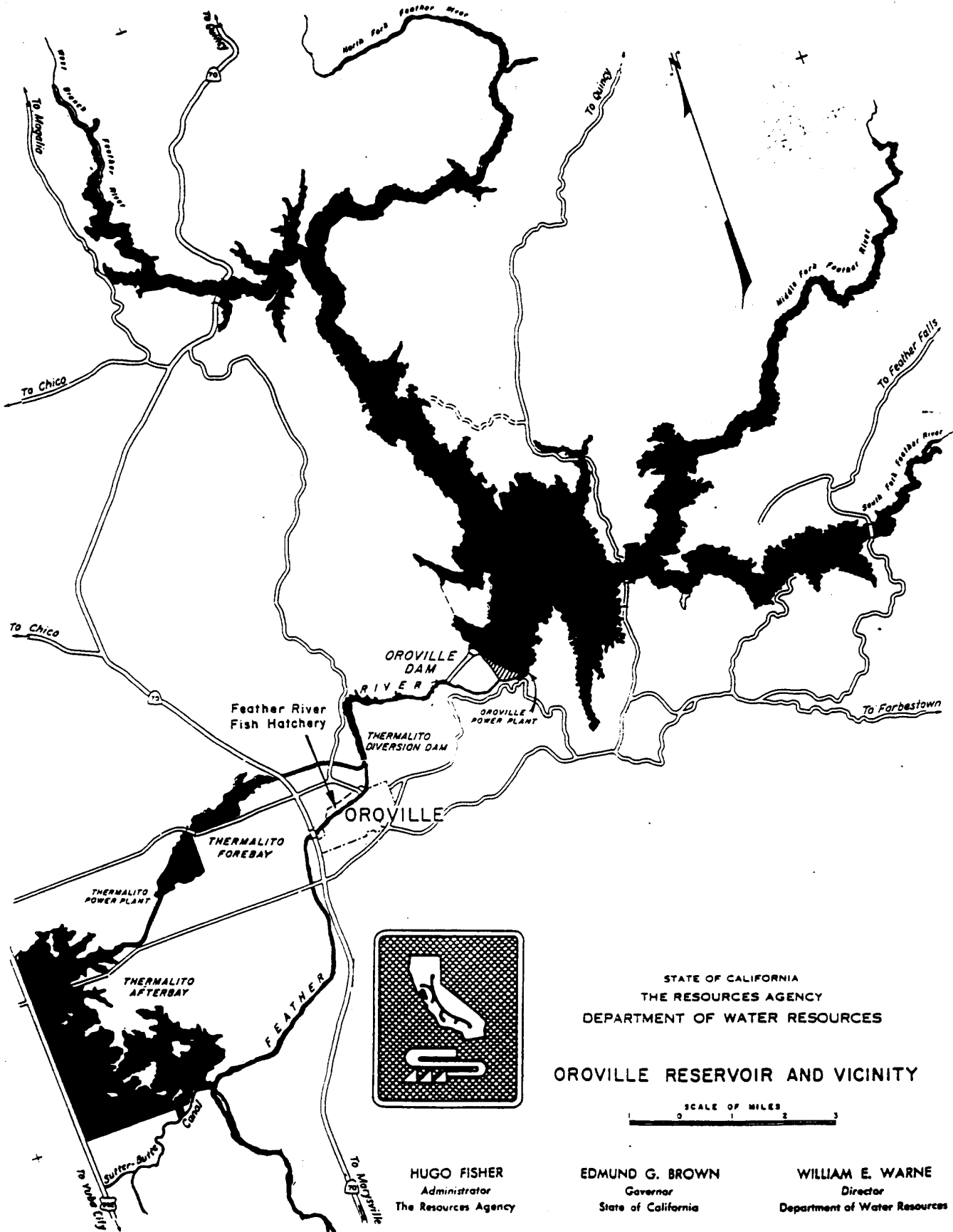
cc: National Oceanic and Atmospheric Administration
National Marine Fisheries Service
California Department of Fish and Game
United States Fish and Wildlife Service

EXHIBIT "B" PG 3 OF 17

TEMPERATURE CONTROL OF WATER FROM OROVILLE RESERVOIR



"B" 4 17



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

OROVILLE RESERVOIR AND VICINITY

SCALE OF MILES
0 1 2 3

HUGO FISHER
Administrator
The Resources Agency

EDMUND G. BROWN
Governor
State of California

WILLIAM E. WARNE
Director
Department of Water Resources

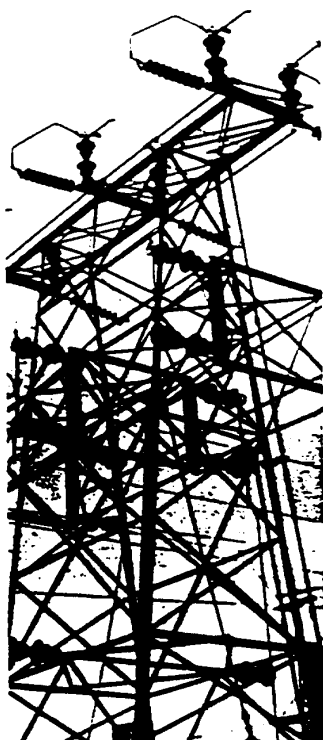
THE
WATER
TEMPERATURE
PROBLEM

A key feature of the State Water Project is Oroville Dam, the highest earthfill dam in the world. Located a few miles above Oroville on the Feather River, this great dam will control floods, will produce power at both Oroville and Thermalito Power Plants, and will provide water to meet the needs of Californians.

Among these needs are water for fisheries, for crops, and for recreation.

One of the complex problems of big reservoirs, such as that which will rise behind Oroville Dam, is the control of the temperature of their released water. Locally, releases of very cold water can harm the fishery, can retard the growth of irrigated crops, and can discourage water sports.

Cold water releases can harm the fishery, retard irrigated crops, and discourage water sports. Flood control and power production remain unaffected by water temperature.



FISH,

RICE, AND

SNORKLE

The California Department of Water Resources has studied the potentially detrimental effects of cold water releases from the depths of Oroville reservoir upon local crops, fisheries, and recreation.

Concluding that a means must be found to control the temperature of releases from Oroville reservoir so as to meet the diverse needs of a cold-water and a warmwater fishery, of rice growers, and of swimmers, snorklers, and water skiers, the Department set about to find that means.

This booklet describes the problems involved and reports on the solution discovered.



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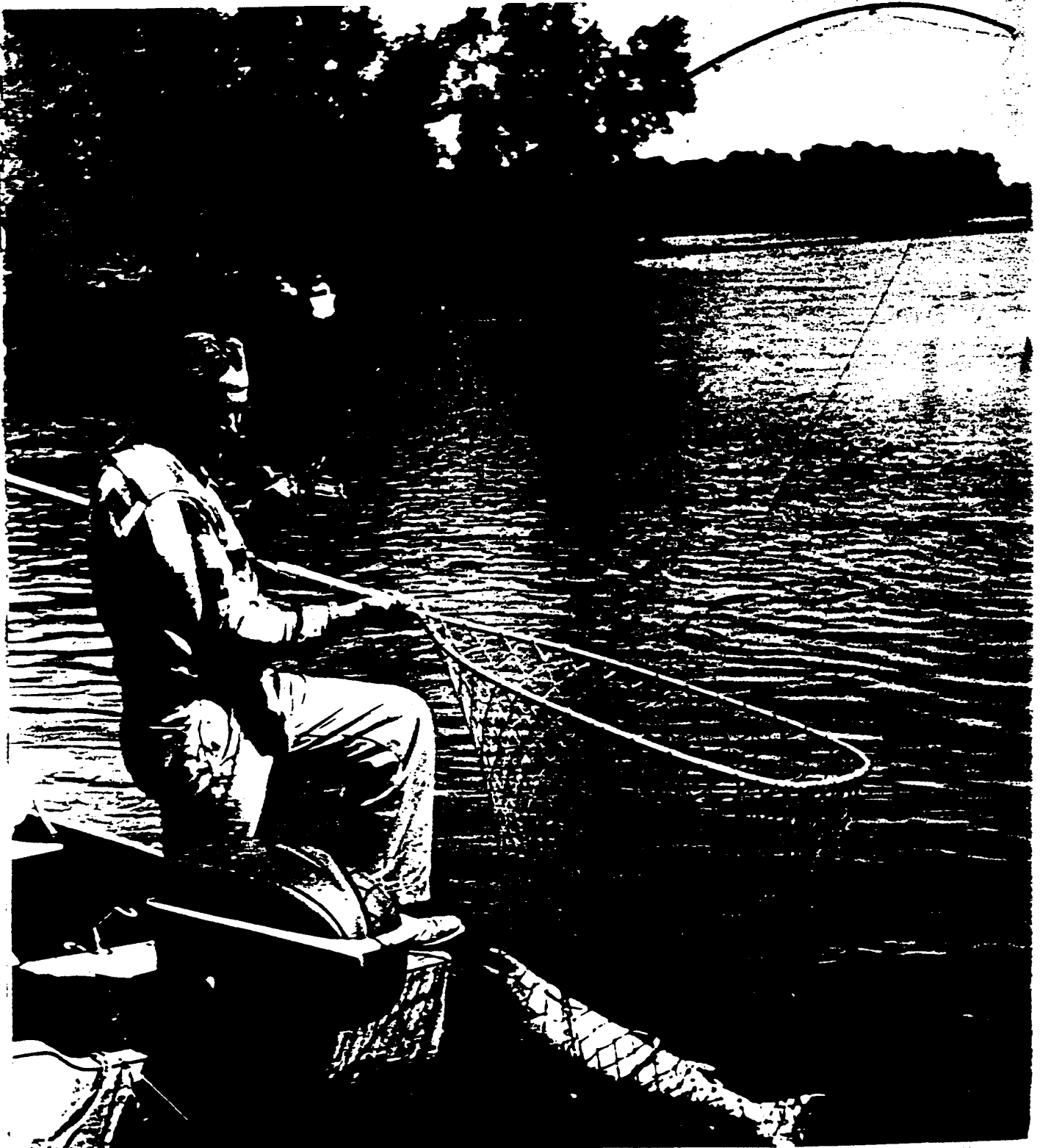
COLD WATER

The reservoir behind Oroville Dam will have a maximum water surface area of 15,500 acres and a maximum depth of 700 feet. Stored at such depths, the water of melting snows and winter floods stays cold indefinitely. If the outlet structure releases water only from these depths, the temperature of the released water in May would be about 42°F.

In the past, rivers and streams near Oroville have been considerably warmer. They have averaged from 52°F on May 1 to 72°F in August. The existing fishery has flourished in these warmer waters. The Department of Water Resources intends to see that cold water releases from Oroville reservoir do not harm that fishery.

"B" 11 17

Spring run salmon fishing



FISH

The Feather River abounds in warmwater gamefish: striped bass, largemouth and smallmouth bass, shad, and catfish. During their growing season -- April through October -- these fish thrive best in waters averaging 60° to 75°F.

Equally important to the river are its spring and fall runs of king salmon. Both runs spawn in the cooler waters of fall, but the spring run salmon, which travel upstream in the spring and early summer, have sought the deep, cool, canyon pools above Oroville dam site. Water that is too warm harms the yet unspawned salmon eggs. In waters of an estimated 60° to 65°F, the spring run salmon rest until their spawning time in late September and in October.

Blocked from these cool pools by Oroville Dam, the salmon would have to hold over in what traditionally have been warmer downstream waters if special provision were not made for their protection. Such provision will be made.

Water released from a single low-level outlet at Oroville Dam would be too cold for hatching salmon eggs and rearing young fish.

The Feather River Fish Hatchery, itself a part of the State Water Project, will lie below the dam.

Apart from a slight but desirable seasonal variation, water temperatures at the hatchery should hold around 55°F.

Unless the temperature of water released from Oroville reservoir is controlled, the Feather River Fish Hatchery cannot operate successfully.



RICE

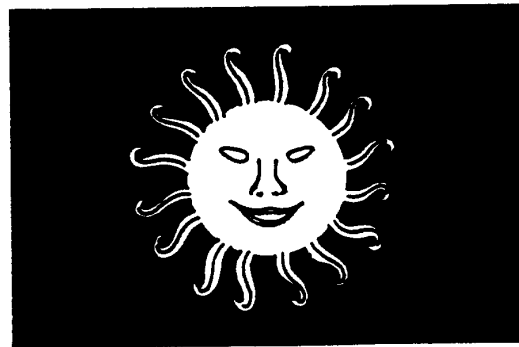
The fields of the Feather River Service Area will be irrigated by releases from Oroville reservoir. Rice production is important to the economy here; and irrigation water temperature is a critical factor in rice growth.

Cold water released from the depths of Oroville reservoir would harm the rice crop. Even without Oroville Dam, water temperatures of the Feather River are not ideal for rice growth. Their average May through August range has been from 52° to 72° F.

The University of California has demonstrated that rice plants thrive best when the temperature of irrigating waters ranges from 59° to 77° F. Even within this critical range, temperature fluctuation drastically affects the harvest.

Thermographs, placed in the Feather River above and below Oroville and in the canals of the Feather River Service Area, have provided a comprehensive record of water temperatures.

With a proper outlet structure at Oroville Dam, the temperature of releases can be controlled so as to serve the agricultural interests of the area.



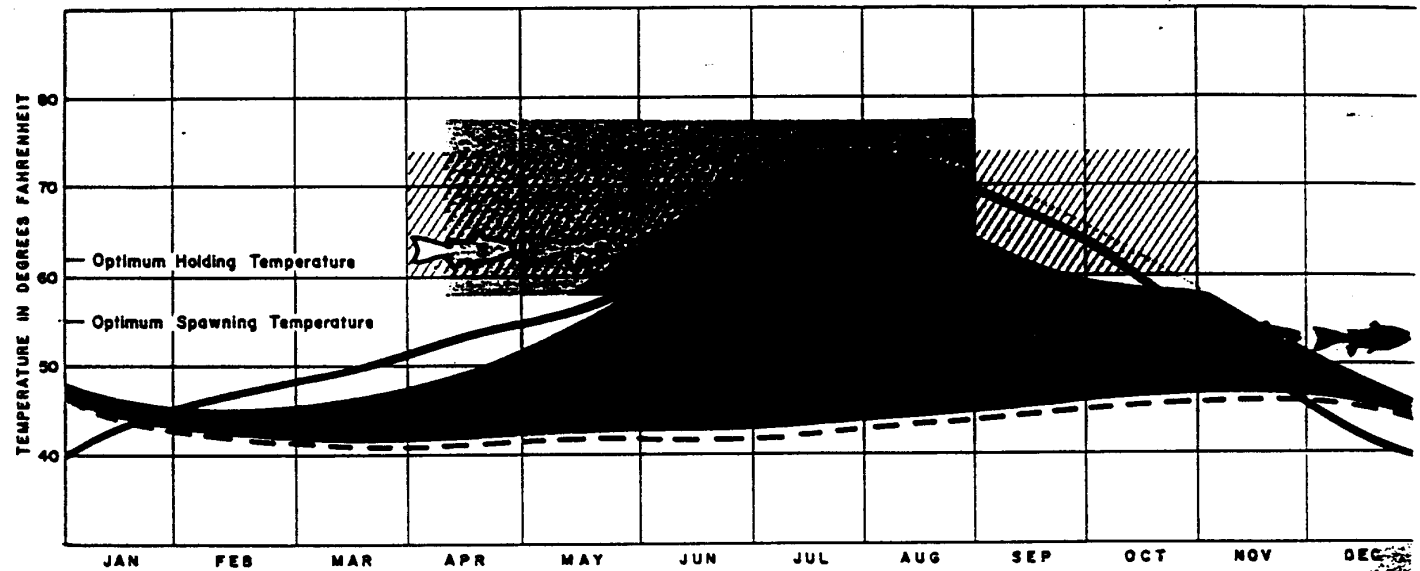
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Rice fields



TEMPERATURE RANGE CHART

- FEATHER RIVER (DOWN TO GROVILLE DAM) 10 MILES BELOW DANGOTE
- BOTTOM OF GROVILLE RESERVOIR
- THERMALITO AFTERBAY WARMING EFFECT
- RANGE AVAILABLE FROM GROVILLE RESERVOIR



SALMON

S SPRING RUN

F FALL RUN



HOLDING PERIOD



SPAWNING PERIOD

OPTIMUM WATER TEMPERATURE RANGES



WARMWATER GAME FISH GROWING SEASON



RICE IRRIGATION SEASON

This graph depicts historic average temperatures of Feather River waters and the estimated temperature range of releases from Oroville Reservoir and Thermalito Afterbay. It relates such temperatures to optimum temperature ranges for rice irrigation waters and for the warmwater fishery and to preferred water temperatures for the holding and spawning of salmon.

Self- team

Introduce : Ray Bell, MD Short, Floyd Higgins, -Self
representing the OROVILLE FOUNDATION OF FLIGHT,

affiliated with the Oroville Chapter of the EXPERIMENTAL
AIRCRAFT ASSOCIATION. Your EAA group of citizens.

Our Chapter and Foundation meet monthly and participate in
events as well as learning and teaching various aspects of general
aviation to young and old citizens at our Vinyl Briefing Hut
adjacent to the Golf Course on the Oroville Airport property.
Where the public is always invited and welcome, especially during
our monthly fly-in breakfast's
held on the third Saturday of each month.

Our mission here in the Oroville area is to bring awareness, and
the joy of flight to the young and old alike, and to promote a better
understanding of aviation in general. Along with that we would
like to ask that in the future general aviation will be allowed to
expand and grow, on land as well as on the abundant waterways
we have to offer here around Oroville. Specifically - a year around
base to accomodate Seaplanes at the Afterbay waterway.

To begin with, I would like to bring up a factor that should be
considered in the choosing of a Seaplane base here in Oroville.
Presently, there does not exist any Seaplane base between San
Francisco and Portland, Oregon. Float planes must refuel at
general boating marinas, mixing with boat traffic, maneuvering
around upright signs and fuel dock pumps, as well as being offered
low octane fuel instead of high octane aircraft fuel. Seaplanes
could contact the local Flight Base Operator by radio while in flight
and arrange for dockside fuel delivery during their flights in and

*Hand to you & back
Exhibit 1
to you*

through this area if we could establish a Seaplane base here at the Oroville afterbay adjacent to our airport.

Over the past three years, during our aircraft events, such as the Starduster biplane Open house fly-in and presenting the B-17 Bomber "The Aluminum Overcast", we have accomodated float planes for the public to enjoy also.

We have found that the site we have chosen is relatively clear of heavy boat traffic, has a relatively low count of wildlife to disturb, and meets all FAA requirements in size, depth, approach and departure pathways.

The addition of a Seaplane facility here in Oroville should bring about about aviation events and encourage the development of float plane activities and public participation in watercraft use and ownership here in Oroville

*M/D has brought a float plane license and float
certificate in in lobby*

Have folder w/ aerial photos

*Comments and requirements taken from
Seaplane Pilots Association web site -
explains environmental impact studies*

*Ferc Project #100
Exhibit C
10/29/01
2/12/04*

Appendix F

Cumulative Effects and ESA Impacts Guidance

APPENDIX F
DRAFT
OROVILLE FACILITIES RELICENSING

**GUIDANCE FOR STUDY OF CUMULATIVE IMPACTS AND IMPACTS ON
SPECIES LISTED UNDER THE FEDERAL ENDANGERED SPECIES ACT**

INTRODUCTION

The California Department of Water Resources (DWR), licensee for the Oroville Facilities, FERC Project 2100 (Project 2100), is preparing an Application for New License (Application) using the Alternative Licensing Procedures (ALP). The Application will include a Preliminary Draft Environmental Assessment (PDEA) and Biological Assessment (BA). This guidance will assist DWR and other members of the Collaborative Team to develop and implement study plans that address the project's cumulative impacts on all resources and its impacts on endangered or threatened species.

The National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and federal Endangered Species Act (ESA), implementing rules, and official guidance documents establish their own requirements. Through the integrated steps described below, the study plans will address such requirements in a non-duplicative manner.

Cumulative impacts are the incremental impacts of relicensing Project 2100, when considered together with past, present, and future actions (including those of third parties) that affect the same resources.¹ Impacts on species listed under the ESA can be categorized as direct, indirect,² or cumulative.

¹ The Council on Environmental Quality defines cumulative impact as the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such actions (40 CFR § 1508.7). The Guidelines for Implementation of the California Environmental Quality Act (2002) defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Furthermore, "the individual effects may be changes resulting from a single project or a number of separate projects," and "the cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." "Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." [cites] ESA defines "cumulative effects" to include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area. Federal actions that are unrelated to the proposed action are not considered because they require independent consultation pursuant to section 7 of the ESA. 50 CFR §402.02. Cumulative impacts can be categorized as additive or interactive. (CEQ 1997 Table 1-2) An additive impact emerges from persistent additions from one kind of source, whether through time or space. An interactive impact results from more than one kind of source. Piecemeal physical destruction of wetlands is additive; physical destruction of wetlands combined with damage from toxic substances is interactive.

² The Joint Regulations on Endangered Species (50 CFR §402.02) define indirect effects as "those that are caused by the proposed action and are later in time, but still are reasonably certain to occur". Direct effects are those that occur in the same place and at the same time and are a direct result of the proposed action.

DWR will design and implement study plans under this guidance in an iterative manner. Consistent with the Process Protocols and based upon the cumulative impact evaluations or study results, DWR may amend a study plan (for example, the definition of the geographic boundary for a project impact, as described in step 5) on the basis of study results or add a new study plan.

This guidance does not prejudice the interpretation of study results and specifically, the scope of DWR's duty to mitigate the project's cumulative impacts or its impacts on listed species. Such duty will be in the context of other regulatory actions³ which have established a baseline for operation of the Bay-Delta and its upstream tributaries. Finally, this document does not interpret, amend, or supplant official guidance under NEPA, CEQA, and ESA.

STEPS FOR INTEGRATING THE FEDERAL ENDANGERED SPECIES ACT WITH THE OROVILLE RELICENSING PROCESS AND CONDUCTING CUMULATIVE IMPACT ANALYSIS

The following 9 steps have been identified for addressing the ESA⁴ and cumulative impacts analyses⁵. The first four steps include 1) developing a comprehensive project description, 2) identifying both environmental and socioeconomic⁶ resources potentially affected including direct, indirect, and cumulative effects, as well as interrelated and interdependent actions⁷, 3) determining if a potential for impacts exists, and 4) identifying geographic⁸ and temporal bounds. The remaining steps will assist in compiling existing information and conducting studies, will facilitate the identification of additional study needs, and will aid DWR in preparing a Draft Biological Assessment

³ Some of the more important regulations Project 2100 must comply with are the 1995 Water Quality Control Plan adopted by the State Water Resources Control Board for the Bay-Delta Estuary, which identified municipal and industrial, agricultural, and fish and wildlife beneficial uses for water of the estuary and specified objectives to protect these uses, and SWRCD Water Right Decision 1641 which implemented the objectives. In addition, Project 2100 must comply with Biological Opinions adopted for the Delta Smelt and Winter Run Salmon, which designated additional water quality and operational requirements.

⁴ The procedural direction for assessing ESA impacts and implementing section 7 consultations is provided in the ESA, the regulations for implementing the ESA (50 CFR §402), the joint NMFS and U.S. Fish and Wildlife Service Endangered Species Act Handbook (Handbook), and the Interagency Task Force report on improving coordination of ESA section 7 consultation with the FERC licensing process (ITF). Additional background on these guidance documents can be found in Attachment 1.

⁵ In conducting the cumulative impacts analysis, the Collaborative Team will consider employing a number of tools, including, but not limited to: CEQ's Principles of Cumulative Effects Analysis and FERC's guidelines for preparing environmental assessments, Section V.B. Cumulative Effects. Copies of these tools are presented in Attachment 2.

⁶ Socioeconomic resources are defined in Section 1508.8 of CEQ's regulations.

⁷ Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.

⁸ For ESA impact analyses, the geographic bounds is also termed the action area which is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR §402.2).

(BA) that meets the expectations of the resource agencies. The first step will be undertaken once as a separate activity. The information from step 1 will aid in the development of the ESA and cumulative study plans.

Several of the steps are not sequential, but rather overlapping and iterative. In particular, Steps 2, 3, 4 and 5 will initially occur during study plan preparation, based on the information developed in step 1, other existing information and input from the scoping process. Steps 2, 4, and 5 will be reconsidered during implementation of the study program to ensure potentially affected resources are identified, that there is a potential for project effects on the potentially affected resource, and that the geographic bounds are appropriate.

Step 1. Comprehensive Project Information

The first step would be to provide comprehensive information about the project and its setting as related to other projects in the general area. This will serve as background information for both the ESA and cumulative impact analyses study plans. Much of this information would be extracted and summarized from the Initial Information Package (IIP). The project information would focus on the Oroville Facilities and their ongoing operations. The Oroville Facilities include Lake Oroville, Oroville Dam, the Edward Hyatt Powerplant, the Thermalito Diversion Dam Powerplant, the Thermalito Pumping-Generating Plant, Thermalito Diversion Dam, the Thermalito Power Canal, the Thermalito Forebay, the Forebay Dam, the Feather River Fish Hatchery, and the Fish Barrier Dam. Since the proposed action is the relicensing of these facilities, other State Water Project (SWP) facilities and operations will be described in less detail than the Oroville Facilities, as part of the interrelated projects description (see below), to the extent that these SWP features are interrelated to the Oroville Facilities, FERC Project No.2100.

1) *project description and statement of the nature of existing water contracts* – Include a detailed description of the Oroville Facilities. Provide a list of existing water contracts for the Oroville Facilities including information on the parties involved, water quantity, and duration. Other aspects and the contracts themselves will not be provided unless there is a specific need identified for this information. The project description will provide necessary information to determine the level of scope needed in the study plans.

2) *statement of the nature, extent, and use of water rights by DWR in the operation of the Oroville project* - DWR has permitted water rights associated with the operation of Oroville Dam and, more broadly, the State Water Project. The nature of these rights, including downstream settlement agreements, will be discussed. These water rights are under the jurisdiction of the State Water Resources Control Board, and pursuant to Section 27 of the Federal Power Act, FERC and the relicensing process cannot affect or interfere with State water allocations or State water rights laws.

3) *statement of the nature of various Oroville Facilities project purposes that are subject to mandatory conditioning under FERC Project 2100 relicensing jurisdiction and related constraints* - Include electrical generation, recreation, fish and wildlife enhancement and instream flow requirements. Provide information on existing biological opinions such as

for the delta smelt, salmon and steelhead and rely on this information for existing effects of the Oroville Facilities.

4) *description of the project area and DWR's title to, or rights to occupy private lands -*

Provide the project boundary description as presented in the IIP. Land within the Oroville Project boundary is primarily state owned and managed, with a small portion being land managed by U.S. Forest Service and U.S. Bureau of Land Management. There are seven land and resource management plans that guide management of these lands. Describe the dates these plans were put in place and dates they are to be renewed. Any analysis should examine opportunities for incorporating new resource protection measures into these plans whenever possible. No privately owned lands exist within the Project boundary. Describe the project area, which is defined as the area in the immediate vicinity of the project, to provide context for the project boundary description.

5) *description of the operation of the Oroville facilities -* Provide a description of project operations and the effects on flows as described in the IIP. The description will include a discussion of the relationship between the timing of energy production and the requirement of the project to meet downstream and delta flow requirements, deliveries to local senior water rights holders, flood management maximum storage objectives and deliveries to the State Water Project contractors. The discussion will include a simplified "plumbing diagram" with an associated narrative describing the power plants, reservoirs, major diversions, the Feather River Fish Hatchery, associated facilities and the movement of water through these interconnected facilities. Pumped-storage operations will also be described. Tables and graphs will be used to characterize the minimum and maximum downstream flow requirements and maximum flood storage requirements and their influence on operations at different times of the year.

6) *description of the average annual energy generated by the project, firm capacity, ancillary services production and the role of the project in operating the SWP and the California power market -* Edward Hyatt and Thermalito Pumping-Generating plants, and Thermalito Diversion plant generate about 2,400 GWh in a median water year.

Conditions vary with the annual runoff to the Feather River and generation has ranged from below 1,000 GWh in critically dry years to over 3,700 GWh in very wet years. The maximum or firm capacity rating can be diminished during periods of severe reservoir drawdown. To the maximum extent possible, energy is generated from the project during the on-peak hours. DWR attempts to confine the SWP pumping load to the off-peak hours, thus, allowing it to market surplus on-peak generation. This distinct ability to shift the majority of the pumping loads to the off-peak hours provides unique opportunities for negotiating long-term contracts and participating in California's energy and ancillary services markets. DWR will supply a description of long-term power contracts and its shorter-term energy and ancillary services transactions including the SWP load management capability and Oroville's significant contribution to the reliable operation of the California Independent System Operator's electric transmission grid. DWR will also describe ongoing protective measures for raptors on those transmission and distribution lines that are part of the project.

7) *description of maintenance practices on project features -* Provide a description of maintenance of the Oroville Facilities, including project licensed transmission lines and

lands. Describe specific written policy guidance, training required or provided, brochures etc. on protection of TES species. Focus would be on how project maintenance affects operations and the potential for affecting threatened and endangered and Forest Service sensitive species.

8) *description of State Water Project and its interrelationship with the Oroville Facilities*
Provide a brief description of how the Oroville Facilities relate to other State Water Project facilities and projects. This information is not necessary for assessment of direct and indirect impacts, but it may be needed for the cumulative impacts analysis. Note that DWR Project No. 2426 is under a separate FERC license and only briefly will be addressed here. This project is located in the southern portion of the SWP and is not dependent upon the relicensing of Project 2100.

9) *description of the effects of the current operation of the Oroville Facilities on the flow that enters, passes through, and exits the SWP* - Explain how the water is used in the SWP, how SWP operations are controlled by an existing Water Quality Control Plan adopted for the Bay-Delta Estuary, water right decision and certain biological opinions and how these institutional constraints, including the Coordinated Operating Agreement provisions affect the operation of the Oroville Facilities.

10) *description of the operations of agencies/entities in the vicinity of the project that are related to project operations but are not subject to mandatory conditioning under FERC jurisdiction through the Project 2100 license* - Describe ongoing activities that: 1) are related to or are in the immediate vicinity of the project; and 2) have a direct bearing on the resource issues related to FERC's relicensing of Project 2100 but are not subject to FERC jurisdiction under the license for Project 2100. Examples of activities include the Oroville Dam water supply and flood management operations; uses of supplies by downstream water rights holders that receive water from the Thermalito Afterbay under downstream settlement agreements; and Department of Fish and Game hatchery activities that are not required by FERC conditions of approval. Information that is not subject to FERC jurisdiction will be considered in the cumulative impacts analysis.

Step 2. Identify and Describe Potentially Affected Resources

The ESA and cumulative impacts studies will focus on potentially affected resources. Potentially affected resources are currently grouped under environmental, recreational, socioeconomic and/or cultural resource areas. Potentially affected resources are resources singled out for consideration because of their importance and the possibility they may be impacted by operation and maintenance of Project 2100 under new license conditions. An initial list of potentially affected resources will be developed based upon concerns presented during the scoping process, in comprehensive plans, and from comments and recommendations received from the Collaborative Team. Information on the effects of other projects (see step 5 below) on these potentially affected resources will be gathered during the relicensing study program for possible inclusion in the biological assessment and the final cumulative impact assessment presented in the APEA/DEIR. The potentially affected resources will be those then identified through study to be impacted directly or indirectly by the ongoing or potential relicensed operation and/or maintenance of Project 2100.

Each work group will review all relevant issues and identify those potentially affected resources in each of the resource areas that should be included in the initial list of potential affected resources. For environmental resources, cumulative impact areas identified for evaluation consist of geomorphology, water quality (e.g. - water temperature), aquatic resources (e.g. - fish passage and hatchery operations), terrestrial resources, and threatened, endangered, and proposed, aquatic and terrestrial species. For endangered, threatened, proposed or candidate species potentially affected by the project, DWR, with input from and in collaboration with USFWS, NMFS, USFS, and CDFG, will develop a comprehensive list of threatened, endangered, and special status (TES) species potentially occurring within the geographic bounds for analysis (see Step 4). Potentially affected critical habitat will also be identified (see Exhibit 1). (Note: Exhibit 1 also shows that a habitat suitability will be conducted prior to the effects analysis.)

Step 3. Compile list of existing scientific and commercial information as well as ongoing studies that are applicable to the affected ESA species and their respective designated critical habitat, and the cumulative impacts analysis.

- 1) Identify and summarize ongoing studies being conducted specifically for the Oroville relicensing process.
- 2) Identify and summarize existing and ongoing studies within the geographic bounds that are applicable to evaluating baseline conditions and project effects.

Step 4. Determine if Potential for Impacts Exists

The APEA/DEIR/ESA study program will determine which resources are directly or indirectly impacted by the ongoing and potential relicensed operation and/or maintenance of Project 2100, consistent with the impact evaluation requirements of NEPA, CEQA, and ESA. The cumulative impact studies will include each affected resource for which a potentially significant impact may occur, whereas the ESA studies will include each resource for which a measurable effect may occur. Further, the cumulative impact studies will include affected resources not significantly impacted when the less-than-significant impacts added to other development impacts that are less than significant impacts could result in significant impacts to the resource. Determinations on potential impacts to resources should be based on the record and should be accomplished through the collaborative process using agreed upon criteria, consistent with the impact evaluation requirements of NEPA, CEQA, and ESA. Affected resources upon which potentially significant impacts may occur will be considered in the final cumulative impact analysis.

Step 5. Identify Geographic Bounds and Temporal Bounds for Analysis

The geographic boundary for each study in the APEA/DEIR program will be determined on a resource-by-resource basis, following the guidance provided by NEPA, CEQA, ESA and the FERC environmental document content requirements. The general focus will be the Feather River or Feather River basin. Typically, the studies will focus on the existing FERC boundary, and extend upstream of project waters to the next barrier to fish migration, and downstream in the Feather River to the confluence with the Sacramento

River. However, the boundary for an individual study will be the point where the study may provide a reasonable measure of the project's potential impact on the potentially affected resource in question. FERC has also explained "In the environmental review process, practical limits must necessarily be established regarding the geographic area in which impacts of the proposed action are likely to occur, the scope of the analysis could otherwise be virtually unlimited."⁹ The boundary may subsequently be adjusted on the basis of specific studies or new information, including a prior year's study results. If the new information indicates that the geographic bounds should be expanded or contracted, the applicable Work Group will discuss the basis for change and revise the geographic bounds as appropriate. We give two examples, based on existing information. The appropriate study boundary for impact on the stage of river flow appears to be the confluence with the Sacramento River. Since the relicensing process will not result in new entitlements to use water nor create new rights to export water, FERC relicensing of the Oroville Facilities does not appear to result in new development, or to induce growth in, State Water Project service areas. Thus, the appropriate boundary for impact on water supply will not likely extend south of the Delta or to the State Water Project service areas.

Even if there were changes to the water supply from the operation of the Oroville Facilities, the effects of such changes could not reasonably be evaluated. FERC has recognized the "problem of extending the geographic area of an environmental analysis so significantly that analytical methods might not be able to develop reliable estimates of impacts and mitigation measures." As FERC has explained: "In the environmental review process, practical limits must necessarily be established regarding the geographic area in which impacts of the proposed action are likely to occur; the scope of analysis could otherwise be virtually unlimited."¹⁰

For purposes of cumulative socioeconomic impacts, the geographic scope will include Butte County and other areas as determined in accordance with the steps described above.

DWR will consider historic activities including the effects of the past operations of the Oroville Facilities for both the ESA and cumulative impact studies.

Step 6. Identify other Development and Associated Resource Impacts

The studies will consider other past, present, and reasonably foreseeable future projects and activities that may have an impact on a potentially affected resource also affected by the license for Project 2100. This includes the past and present impacts of all state, federal, or private actions and other human activities, the anticipated impacts of all proposed federal projects that have already undergone formal or early section 7 consultation, and the impacts of state or private actions that are contemporaneous with the consultation in process (50 CFR 402.02).

Specifically, the developments to be considered will include: the non-hydropower functions of this project (water supply and flood control), other hydropower projects

⁹ Public Service Co. of New Hampshire, 68 FERC at 61,863-864, emphasis added.

¹⁰ *Public Service Co. of New Hampshire, supra*, 68 FERC at 61,863-864.

including their associated recreation and fish and wildlife facilities, logging, grazing, mining, and irrigation in the Feather River basin and other State Water Project facilities, which could impact the potentially affected resource. Future projects are considered to be reasonably foreseeable if the environmental documentation is available to confirm and reasonably quantify impacts to the potentially affected resources and/or there is a pending application when the environmental documentation is prepared for Project 2100. Such related projects or activities may be included even if they, or mitigation measures for their contributions to cumulative impacts, are not within the FERC's jurisdiction in this proceeding.

An initial step for understanding past and ongoing impacts on potentially affected resources will be the review and use of the best available scientific and commercial data including comprehensive plans and other regional studies, e.g., FERC documents, CALFED, CVPIA, Sacramento/San Joaquin comprehensive study, and the State Water Resources Control Board compliance and water rights requirements record for the Sacramento-San Joaquin Delta and Suisun Marsh. Use of such information is consistent with CEQ guidance that studies by other agencies should be used to analyze cumulative effects. Additional information to supplement the existing studies may be considered on a resource-by-resource basis based upon the nature of the resource issue.

Related future projects will be added, as needed, to complete the cumulative impact analysis, and will include an evaluation as to whether the additional information is necessary to comply with ESA, NEPA, CEQA, and the FERC environmental document content requirements.

Step 7. Acquire appropriate Federal research permits and conduct studies to determine the direct, indirect, and cumulative impacts.

Select field studies may result in a "taking" as defined by the ESA. To the extent possible, field studies potentially resulting in a taking should be identified in the study plans. For these studies, the following two actions should be undertaken.

- 1) Determine which studies are already permitted under previous or ongoing section 7 or section 10 permits.
- 2) Initiate consultation for proposed studies that are not permitted.

Step 8. Determine Overall Impact and Identify Potential Protection, Mitigation and Enhancement Measures

The studies will evaluate adverse and positive impacts. For purposes of the ESA the analyses will provide scientific and commercial data sufficient to determine whether Project 2100 will jeopardize the continued existence of any threatened or endangered species, will result in the incidental take of any such species or will adversely modify habitat determined to be critical for any threatened or endangered species. Based upon the determination reached, the studies will identify those measures that are within FERC's jurisdiction to include in a new license for Project 2100 that are necessary to eliminate

jeopardy to species or adverse impacts to critical habitat, as well as reasonable and prudent measures necessary to minimize take. For purposes of addressing cumulative impacts, based upon the nature of the impacts identified, the studies will suggest measures to avoid, minimize, mitigate or reduce the severity of the negative effects or to enhance the resource. However, any environmental or socioeconomic mitigation measures included in the settlement agreement for Project 2100 should be limited to the project's proportionate share of the cumulative impacts.

Step 9. Document Determinations of Impact

The product of the ESA studies will be study reports and a draft Biological Assessment (BA) that will be submitted with the draft license application. If it is determined that Project 2100 may affect any listed species or any designated critical habitat, the BA should include proposed measures to reduce or eliminate the effect. The cumulative impacts analysis will be included in study reports and the findings will be documented in the APEA/DEIR.

Resource agencies will provide comments on whether the draft BA meets the requirements of the ESA and 50 CFR §402. Likewise, the Collaborative Team will provide comments on the APEA/DEIR. The resource agencies and the Collaborative Team are active participants in the ALP adopted for Project 2100. Those resource agencies responsible for implementing ESA are providing technical assistance to the DWR to assist them in meeting the requirements of the ESA and the ESA regulations.

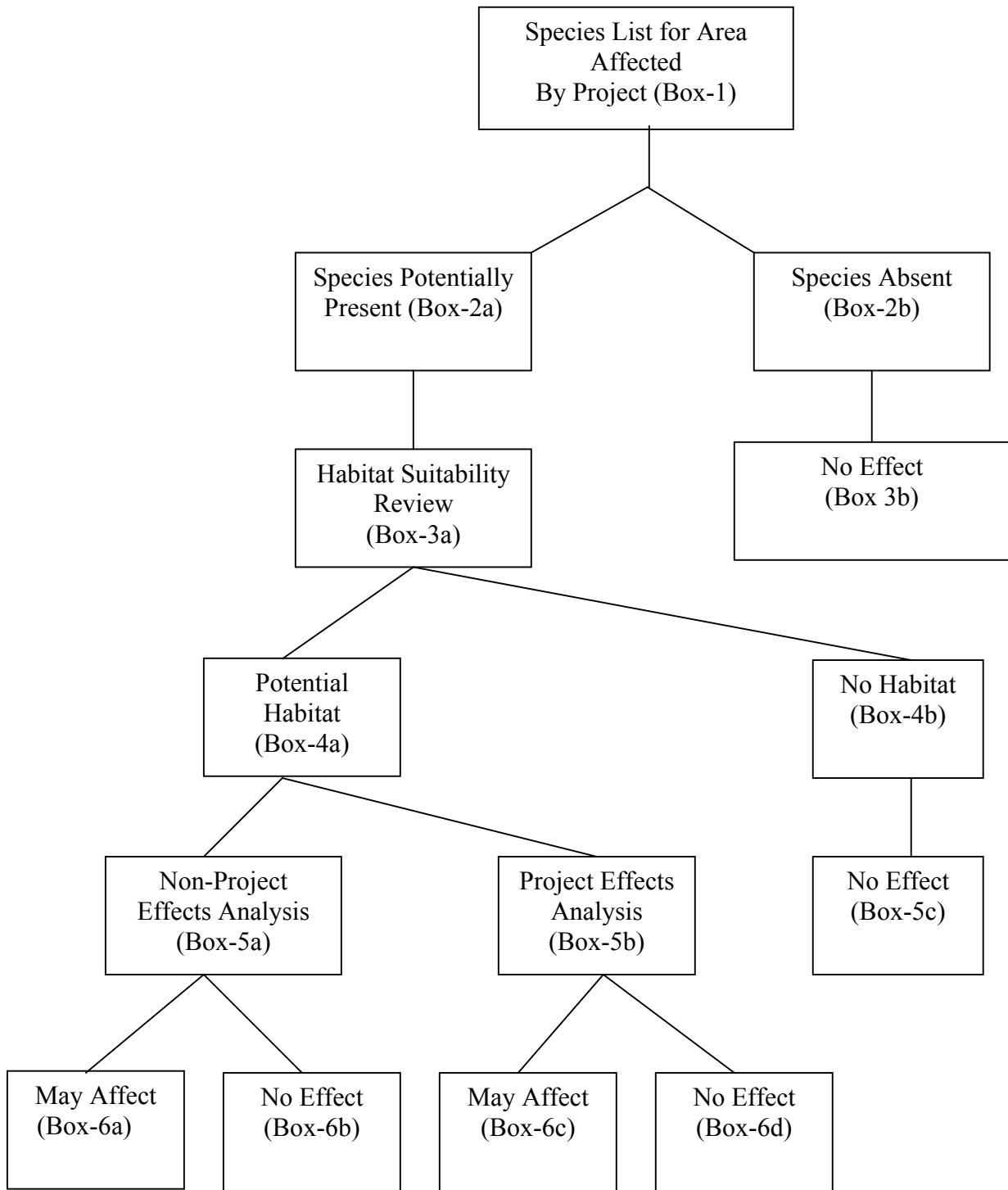
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3. Cumulative Environmental Impacts Analysis, Federal Energy Regulatory Commission, circa 1992. (<http://www.ferc.fed.us/hydro>)
4. Considering Cumulative Effects Under the National Environmental Policy Act, Council on Environmental Quality, 1997. (<http://www.whitehouse.gov/ceq/>)
5. Interagency Task Force Report on NEPA Procedures in FERC Hydroelectric Relicensing, Prepared by the Work Group on the Coordination of Federal Mandates: Federal Energy Regulatory Commission, U.S. Department of the Interior, U.S. Department of Commerce, U.S. Department of Agriculture, Environmental Protection Agency, and Advisory Council on Historic Preservation, May 2000. (http://www.ferc.fed.us/hydro/docs/nepa_final.pdf)

6. Endangered Species Act Handbook, National Marine Fisheries Service and U.S. Fish and Wildlife Service, 1997. (<http://endangered.fws.gov/policies/>)
7. Hydropower Licensing and Endangered Species, A Guide for Applicants, Contractors, and Staff, Federal Energy Regulatory Commission, December 2001. (<http://www.ferc.fed.us/hydro>)
8. Consideration of Compliance and Water Rights Requirements for the Sacramento-San Joaquin Delta and Suisun Marsh, California State Water Resources Control Board, November 20, 1992. (<http://www.swrcb.ca.gov/>)

Exhibit 1 – Habitat Suitability Review

The flow chart and process described below will be used to assess the suitability of habitat located within the geographic bounds.



Box 1. DWR, In collaboration with USFWS, NMFS, USFS, and CDFG, will develop a comprehensive list of threatened, endangered, and special status (TES) species potentially occurring in the Project action area. The action area for FERC Relicensing purposes is defined as the Oroville Facilities Project 2100 boundary as currently defined in the existing license, upstream of project waters to the next barrier to fish migration, and downstream in the Feather River to the confluence with the Sacramento River.

Box 2a. Existing information and sources indicate possible species presence within the action area. Proceed to habitat suitability review.

Box 2b. Existing information and sources indicate species are absent within the action area. No Project effect on species, no further work is necessary for this species as shown in Box 3b.

Box 3a. Assess existing habitat within the Project action area to determine if the habitat is suitable for TES species. This assessment will be based on the best available scientific and commercial information supplemented by field surveys developed and conducted as part of the environmental study plans for Project 2100.

Box 3b. The assessment in Box 1 indicated that the specific species is absent. No further work is necessary.

Box 4a. The results of the habitat suitability assessment performed in 3a indicate that there is suitable habitat present for particular species. Proceed to Effects Analysis described for Box 5a and Box 5b.

Box 4b. The results of the habitat suitability assessment performed in 3a indicate that suitable habitat is not present for particular species. No further work is necessary.

Box 5a. Determine how or if non-Project effects would potentially impact each species for which suitable habitat exists (determined in Box 4a) within the Project action area.

Box 5b. Determine how or if Project effects would potentially impact each species for which suitable habitat exists (determined in Box 4a) within the Project action area.

Box 5c. The results of the habitat suitability assessment performed in 3a indicated that there is no habitat present for a particular species.

Box 6a. Effects analysis in Box 5a indicates that specific species may be negatively impacted by non-Project effects.

Box 6b. Effects analysis in Box 5a indicates that specific species will not be negatively impacted by non-Project effects. No further work is necessary for this species.

Box 6c. Effects analysis in Box 5b indicates that specific species may be negatively affected by the Project. Develop protection, mitigation and enhancement measures to avoid or reduce the severity of the negative effects.

Box 6d. Effects analysis in Box 5b indicates that specific species will not be negatively affected by non-Project effects. No further work is necessary for this species.

ATTACHMENT 1

REGULATORY BACKGROUND ON ENDANGERED SPECIES ACT AND GUIDANCE DOCUMENT SUMMARIES

Pursuant to Section (a)(2) of the Endangered Species Act, as amended (6 U.S.C. 1531 et seq.) (ESA), Federal agencies are required to consult with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS), as appropriate, to ensure that any Federal action is not likely to jeopardize the continued existence of any threatened or endangered species, or result in adverse modification of critical habitat. FERC has determined that the issuance of a new hydroelectric license represents a new commitment of resources, and therefore, necessitates ESA section 7 consultation. If FERC determines that issuance of a hydroelectric license may affect a listed species or critical habitat, then formal consultation is required. The formal consultation process culminates with FWS and/or NMFS issuing a biological opinion (BO) that determines whether or not the proposed action jeopardizes the continued existence of the affected federally listed species. In formulating a BO, FWS and/or NMFS must use the best scientific and commercial data available.

To comply with the section 7 regulations (50 CFR §402.14(c)), an initiation package is submitted with the request for formal consultation and must include the following:

1. A description of the action being covered.
2. A description of the specific area that may be affected by the action.
3. A description of any listed species of critical habitat that may be affected by the action.
4. A description of the manner in which the action may affect any listed species or critical habitat, and an analysis of any cumulative effects. This should include interrelated and interdependent effects of the action, and may include effects outside the area directly affected by the action.
 - Direct Effects: Effects to listed species of designated critical habitat that occur during implementation of the project.
 - Indirect Effects: Effects to listed species that occur later in time or offsite, but are reasonable certain to occur.
 - Cumulative Effects: For purposes of the ESA, cumulative effects are defined as the effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within an action area of the Federal action subject to consultation (50 CFR 402.02).
5. Relevant reports, including any environmental impact statements, environmental assessments, biological assessments or other analysis prepared on the proposal.
6. Any other relevant studies or other information available on the action, the affected listed species, or critical habitat.

The joint NMFS and FWS ESA Handbook states that in determining the effect of ongoing water projects under the Federal Power Act (FPA), NMFS and the FWS should consider the following.

- The total effects of all past activities, including effects of the past operation of the project, current non-federal activities, and Federal projects with completed section 7 consultations, form the environmental baseline.
- To this baseline, future direct and indirect impacts of the operation over the new license or contract period, including effects of any interrelated and interdependent activities, and any reasonably certain future non-Federal activities (cumulative effects), are added to determine the total effect on listed species and their habitat.

The Interagency Task Force (ITF) describes procedures to integrate ESA consultation with the FPA licensing process. These procedures serve as general guidance for applicants, FERC staff, and resource agency staff. The ITF report addresses issues related to coordination of the ESA and the FPA, adequacy of information, and scope of effects of the proposed action. Appendix I of the ITF report outlines a means of streamlining the FPA hydropower licensing process with the ESA consultation process. This streamlining process involves early coordination that should include:

1. A description of the project, including maps and project drawings.
2. A description of the species that may be affected in the project's action area.
3. A list of existing scientific information/studies
4. Identification of needed scientific information/studies
5. Identification of activities that may be interrelated or interdependent with the proposed action.
6. Identification of effects of the project on listed and proposed species, including direct and indirect effects of the project, any interrelated and interdependent actions, as well as cumulative effects.
7. Potential conservation actions and operational criteria that can be incorporated into the project to avoid or minimize effects on listed and proposed species.
8. Information on the legal, economic, and technical feasibility of such actions and criteria.

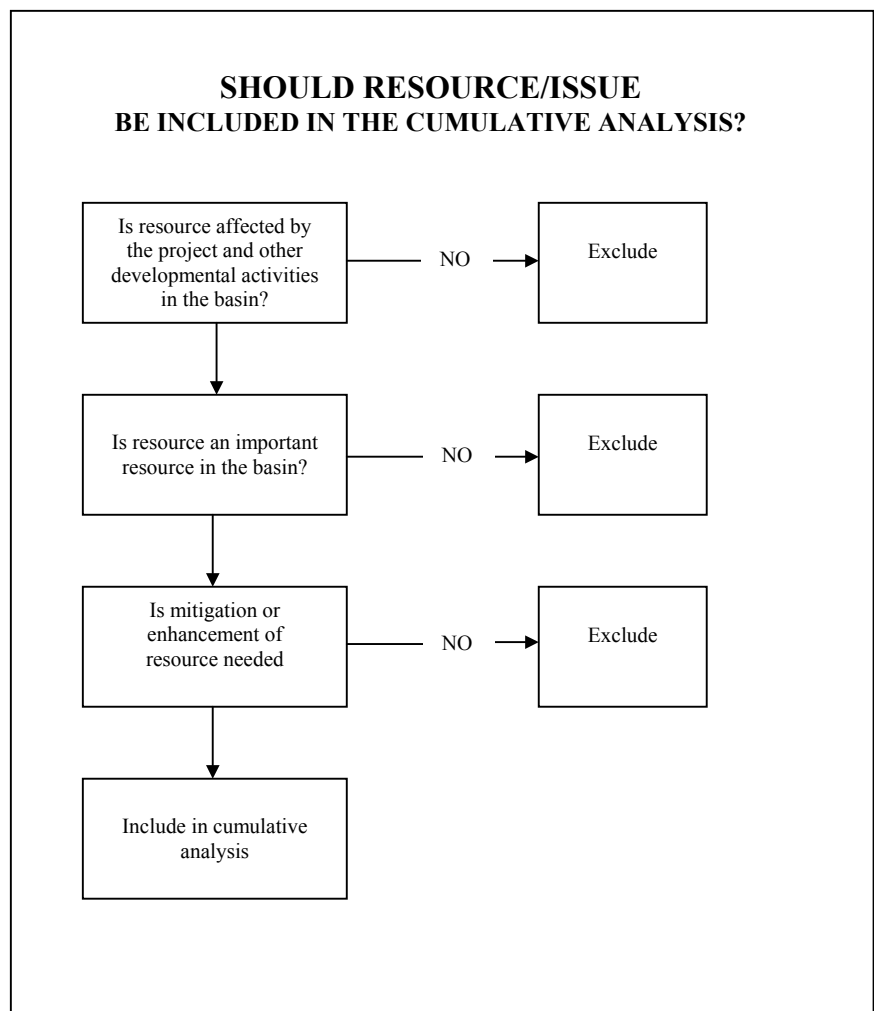
ATTACHMENT 2

PREPARING ENVIRONMENTAL ASSESSMENTS GUIDELINES FOR APPLICANTS, CONTRACTORS, AND STAFF Federal Energy Regulatory Commission March 14, 2001

B. Cumulative Effects

In this section, you'll identify resources that will get a cumulative impacts analysis based on the scooping meeting, site visit, and comments on the scooping documents; the license application' and consultation with the agencies and nongovernmental organizations (NGOs). With that information, you'll determine the appropriate geographic and temporal scope of analysis for those resources. Below, we discuss (1) how to determine which resources need a cumulative effects analysis; (2) the geographic scope of the cumulative analysis and (3) the temporal scope of analysis.

(1) Selecting Resources for Cumulative Analysis: CEQ defines cumulative impacts as impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency or person undertakes the actions. Hydro projects can contribute to cumulative effects when their effects overlap with those of other activities in space, or time, or both. Effects can be either direct or indirect. Direct effects are those that occur in the same place and at the same time and are a direct result of the proposed action. For example, water quality might be affected by reduced spillage at the dam. Indirect effect can occur at a distance from the proposed action, or the effects may appear some time after the proposed action occurs.



For example, and upstream timber harvest area and upstream water sewage treatment plant may affect water quality, in addition to the effects on water quality from the proposed action. Scoping meetings, the application, agency correspondence, and agency and public interest in a particular resource will help you to define whether a resource is cumulatively affects.

When selecting resources for cumulative analysis, it can be very helpful to run the resource through a process such as the one at the right.

Additional guidance on defining cumulative analysis resources can found in Considering Cumulative Effects under the National Environmental Policy Act (Council on Environmental Quality, 1997), which is available on the web at <http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm>.

Example of a Cumulative effects section with a resource selected:

B. Cumulative Effects

According to the Council on Environmental Quality's regulations for implementing NEPA (§1508.7), an action may cause cumulative impacts on the environment if it's impacts overlap in time and/or space with the impacts of other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

Based on our review of MHP's license application and agency and public comments, we have identified the coldwater fisheries resource as having potential to be cumulatively affected by the project in combination with other past, present and future activities. The coldwater fisheries resource was selected because irrigation, domestic water treatment and hydroelectric developments and diversions along the waterway have affected the fishery and habitat by altering the flow regime, blocking or delaying fish movement, and entraining fish into diversion canals or penstocks.

Example of a Cumulative Effects section with no resources selected:

B. Cumulative effects

According to the Council on Environmental Quality's regulations for implementing NEPA (§1508.7), an action may cause cumulative impacts on the environment if it's impacts overlap in time and/or space with the impacts of other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities. Through scoping, agency consultation, and our independent analysis we've identified no resources that would be cumulatively affected by continuing to operate the Angus Project. The project is located in a very small watershed with very little existing or planned future developmental activity other than the existing hydro project.

(2) Geographic Scope of Cumulative Analysis: As the CEQ says, without spatial boundaries, a cumulative effects assessment would be global, and while this may be appropriate for some issues such as global warming, it's not appropriate for most other issues. The scoping process, consultation, site visits, and the license application will help you identify resources that are cumulatively affected. Here, you should briefly describe how those resources are cumulatively affected and explain your choice of the geographic scope of analysis. It's important to remember that no every resource will have the same geographic scope.

To determine spatial boundaries, consider the distance the impact can travel in the context of resource effects from other hydro and non-hydro activities that might affect a wide area. Specifically, you should determine the area(s) that will be affected by the proposed action (impact zone), list the cumulative effects resources within that area that could be affected by the proposed action, and determine the geographic area outside of the impact zone that is occupied by those resources. Finally, you should consider the management plans and jurisdictions of other agencies for the cumulatively affected resource.

For hydropower projects, the geographic scope may be the river basin or mainstem river for some resource such as anadromous fish, or the stream reach and surrounding lands for an endangered plant. You should describe the geographic scope for each cumulatively affected resource.

When defining your geographic scope, discuss the location of other hydro projects and other major developmental activities within the area (such as water withdrawals for irrigation or public water supply; a steam plant that discharges into the impoundment, a water sewage treatment plant located upstream of the project; or a paper mill located on the river that affects water quality). Include a schematic diagram of these developments and/or list them in a table. Briefly describe how your project interacts, affects, or is affected by, these other hydro and water resource developments. The length of discussion should reflect the significance of the interaction. Include details of the effects of these interactions in the environmental impacts analysis section.

Example of a geographic scope on analysis section:

1. Geographic Scope

There are about 44 other dams used for hydroelectric generation in the Copper River Basin. About half of these dams are located on the lower 80-mile-long part of the basin while the other half are located in the upper 70-mile-long part of the basin. An 80 mile-long segment of the river separates these two groups of dams.

These dams have cumulatively affected the fishery (anadromous fish species) and recreation (canoeing and kayaking) on the Copper River. In the fishery (Section V.B.2) and Recreation (Section V.B.5) sections of this DEA, we discuss the site-specific as well as the cumulative effects of relicensing the Angus Project on anadromous fish and recreational boating.

Since a series of dams in the lower reach of the Copper River block the access of several anadromous fish species, we limit our look at the cumulative fishery effects of the Angus Project to potential measures that would help restore fish populations in the basin.

To look at the cumulative impacts on boating recreation, we limit our analysis to the upper river-the 20 mile reach between the Falls and the city where there are eight existing dams.

(3) Temporal Scope of Analysis: The temporal scope includes a brief discussion of past, present, and future actions, and their effects on resources based on the new license term (30-50 years). In this section, you should highlight the effect on the cumulatively affected resources from reasonably foreseeable future actions (for example, the effect on wetlands from a planned timber harvest, or the effect on project operations from a proposed water withdrawal for a ski resort). You should discuss the past actions' effects on the resource in the affected environment section [for an example, see section C below].

Example of a temporal scope section:

2. Temporal Scope

The temporal scope of analysis includes a discussion of the past, present, and reasonably foreseeable future actions and their effects on water, fishery, and recreation resources. Based on the term of the proposed license, we will look 30-50 years into the future, concentrating on the effects on water, fishery, and recreational resources from reasonably foreseeable future actions. The historical discussion is limited, by necessity, to the amount of available information. We identified the present resource conditions base on the license application, agency comments, and comprehensive plans.

C. Proposed Action and Action Alternatives

This is the section of the EA that explains the effects of the action alternatives on a variety of environmental resources. It begins with a brief description of how the section is organized, and includes a brief discussion of resources that wouldn't be affected by the proposed action, and, therefore, won't get a detailed analysis. The discussion should explain why those resources did not get the more detailed analysis.

Example of the Proposed Action and Action Alternatives introduction paragraph:

In this section, we discuss the effects on the project alternatives on environmental resources. For each resource, we first describe the affected environment, which is the existing condition and baseline against which we measure effects. We then discuss and analyze the specific environmental issues.

MHC does not propose any new construction, modifications, or changes to the project itself that would cause land-disturbing activities. However, MHC does propose to periodically remove sediments from the reservoir. This issue is discussed in the Aquatic Resources Section (section V.C.1 – Sediment Removal). There are no other issues dealing with geology and sold resources; therefore, we do not address them further.

For all resources that will be addressed, you should describe –by resource—(a) the affected environment, (b) your analysis of the proposed action and any other recommended alternatives or measures, and (c) any unavoidable adverse impacts. Use this format for all resource areas affected.

Table 1-2 Principles of Cumulative Effects Analysis (CEQ 1997)

1. Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions.

The effects of a proposed action on a given resource, ecosystem, and human community include the present and future effects added to the effects that have taken place in the past. Such cumulative effects must also be added to effects (past, present, and future) caused by all other actions that affect the same resource.

2. Cumulative effects are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who (federal, nonfederal, or private) has taken the action.

Individual effects from disparate activities may add up to or interact to cause additional effects not apparent when looking at the individual effects one at a time. The additional effects contributed by actions unrelated to the proposed action must be included in the analysis of cumulative effects.

3. Cumulative effects need to be analyzed in terms of the specific resource, ecosystem, and human community being affected.

Environmental effects are often evaluated from the perspective of the proposed action. Analyzing cumulative effects requires focusing on the resource, ecosystem, and human community that may be affected and developing an adequate understanding of how the resources are susceptible to effects.

4. It is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful.

For cumulative effects analysis to help the decision maker and inform interested parties, it must be limited through scoping to effects that can be evaluated meaningfully. The boundaries for evaluating cumulative effects should be expanded to the point at which the resource is no longer affected significantly or the effects are no longer of interest to affected parties.

5. Cumulative effects on a given resource, ecosystem, and human community are rarely aligned with political or administrative boundaries.

Resources typically are demarcated according to agency responsibilities, county lines, grazing allotments, or other administrative boundaries. Because natural and sociocultural resources are not usually so aligned, each political entity actually manages only a piece of the affected resource or ecosystem. Cumulative effects analysis on natural systems must use natural ecological boundaries and analysis of human communities must use actual sociocultural boundaries to ensure including all effects.

6. Cumulative effects may result from the accumulation of similar effects or the synergistic interaction of different effects.

Repeated actions may cause effects to build up through simple addition (more and more of the same type of effect), and the same or different actions may produce effects that interact to produce cumulative effects greater than the sum of the effects.

7. Cumulative effects may last for many years beyond the life of the action that caused the effects.

Some actions cause damage lasting far longer than the life of the action itself (e.g., acid mine drainage, radioactive waste contamination, species extinctions). Cumulative effects analysis needs to apply the best science and forecasting techniques to assess potential catastrophic consequences in the future.

8. Each affected resource, ecosystem, and human community must be analyzed in terms of its capacity to accommodate additional effects, based on its own time and space parameters.

Analysts tend to think in terms of how the resource, ecosystem, and human community will be modified given the action's development needs. The most effective cumulative effects analysis focuses on what is needed to ensure long-term productivity or sustainability of the resource.